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ABSTRACT

This report examines participation rates in the Aid to Families with Dependent Children (AFDC) program. TRIM2, a microsimulation model that simulated the eligibility and benefit rules of the AFDC program on a state-by-state basis, showed that there had been a dramatic decline after 1981 in the rate at which AFDC families were applying for and receiving benefits. This phenomenon was caused by the change in the coding of subfamilies (adults who live with children but are not their biological parents) by the Census Bureau on the Current Population Survey, which is the basic input file used to compute eligibility. There was no massive behavioral change on the part of AFDC eligibles in the early 1980s: between 150,000 and 400,000 subfamilies (depending on the year) were omitted from the eligibility estimates between 1967 and 1980. Comparative analyses of the AFDC program that encompass the period before and after the coding change might be impaired by the impact of the change. Participation rates are much lower than previously believed, and are perhaps not at a saturation level. Analysis of trends in the characteristics of AFDC eligibles from 1979 to 1984 reveal the following changes after 1980: (1) more subfamily and family heads were likely to be black, female, young and never married; (2) more family and subfamily heads lived in higher income households and contributed to a lower percentage of household income; and (3) more subfamily heads had a child under 6 years of age. Implications for policy and research are discussed. Data are presented on 14 tables and figures. A bibliography is included. (BJV)

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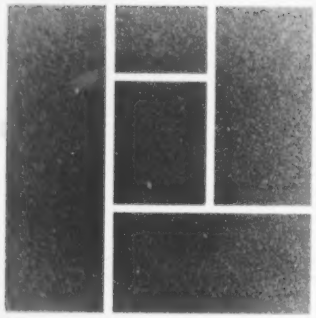

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April 1987

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Abstract

The purpose of this report is to analyze recent changes in participation rates in the Aid to Families with Dependent Children (AFDC) Program using the Urban Institute's TRIM2 microsimulation model. Historically, participation rates in the program as estimated by TRIM2 jumped dramatically in the late 1960s and early 1970s and then stabilized at very high levels in the mid- to late 1970s. By 1980, the participation rate of eligible families in the non-Unemployed Parent (UP) segment of the AFDC Program, which comprises about 95 percent of recipients, was estimated to be 90 percent.

Estimates for 1981, however, showed a sharp downturn. In 1981, the participation rate in the non-UP portion of AFDC dropped to 83 percent and then to 78 percent in 1982. There was little reason to believe that a behavioral change had occurred among AFDC recipient families and thus the effort to explain the decline in rates focused on a seemingly small methodological issue.

Beginning in 1981, the Bureau of the Census began recoding subfamilies on the files used for the TRIM2 simulations of eligibles, the March Current Population Survey (CPS). The recode caused an unexpectedly large increase in the number of subfamilies on the CPS files, from 1.2 million in 1980 to 1.9 in 1981 and 2.2 million in 1982. Since subfamilies are eligible for AFDC benefits, there was also a large increase in the number of AFDC eligibles in this period: about 500,000 subfamilies were added to TRIM2 eligibility estimates between 1980 and 1982.

The current report re-calculates participation rates by estimating the number of eligible subfamilies missing from pre-1980 CPS files. These reestimates show that previous participation rate estimates were eight to ten percentage points too high throughout the late 1960s and 1970s. The reestimate of the 1980 participation rate in the non-UP portion of the program, for example, is 82 percent rather than 90 percent. Thus, in fact, there appears to have been no decline in participation rates during the early 1980s.

The report also provides an analysis of changes in the characteristics of AFDC eligible families and subfamilies between 1979 and 1983. The major finding is that the increase in the number of eligible subfamilies caused some significant changes in the characteristics of the AFDC-eligible population. Eligible family heads were more likely to be black, female, young and never married after 1980 than before.

The report discusses what implications these changes might have for AFDC policy and for research on low-income families. Research using the family as a unit of analysis is likely to be dramatically affected and some of the observed changes in low-income families in the post-1980 period are probably erroneous.

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EXECUTIVE SUMMARY

Introduction

This report presents the results of a major study on participation rates in the Aid to Families with Dependent Children (AFDC) Program. The report was completed by Patricia Ruggles and Richard C. Michel of The Urban Institute for the Office of the Assistant Secretary for Planning and Evaluation of the Department of Health and Human Services.

Participation rates in transfer programs have long been an important element in evaluating a program: they indicate what percentage of families or individuals eligible for a given program are actually participating. These rates are often difficult to estimate because while case record surveys provide detailed information on those who actually receive benefits, they do not provide data on the number or characteristics of those who are eligible for benefits but do not take advantage of them. Traditionally, therefore, these eligibles are identified using more general data bases from the Bureau of the Census. Since the early 1970s, such estimates of eligibles have been done using large microsimulation models which apply detailed algorithms of program eligibility and benefit rules to selected Census data bases, principally the March Current Population Survey (CPS).

The current study was done using one such microsimulation model, called TRIM2 (for Transfer Income Model, Generation 2), which has been under development at The Urban Institute since 1968. TRIM2 contains a complex AFDC module which simulates the eligibility and benefit rules of that program on a state-by-state basis.

The initial motivation for undertaking this project was the result of simulations from the TRIM2 model which indicated that the participation rate of eligibles in the AFDC Program took a sharp downward turn in the early 1980s. The major finding of this project has been that this downturn in participation rates was largely an illusion created by a seemingly small change in the coding procedures by the Bureau of the Census, which added more than a million subfamilies to the population. The analysis of the coding change made it clear that there was no dramatic reversal of participation in the early 1980s because previous estimates of participation rates in the AFDC Program were too high by a significant margin.

The results of the study also indicate that the characteristics of AFDC eligibles were altered perceptibly by the coding change. The implications of these results extend beyond analyses of the AFDC Program: it appears likely that any CPS-based historical studies of the low-income population that use the family as the basic unit of analysis will be impaired. This may include estimates of the number of families in poverty.

Background: Previous Studies of Participation in AFDC

During the period from 1967 to 1972, there was a tremendous growth in the number of families receiving AFDC benefits. In 1967, approximately 1.2 million families received benefits in a typical month. By 1972, the number receiving benefits in a typical month had more than doubled to 3.0 million families.

This unprecedented growth in the nation's most visible welfare program prompted much concern among federal and state officials about skyrocketing costs and caseloads in the program. In 1973, Barbara Boland, then of The Urban Institute, produced a report for the Joint Economic Committee which used The Institute's TRIM model to simulate eligibility for the program. The purpose of this simulation was to identify the cause of program growth in the late 1960s and early 1970s and to determine whether further growth was possible.[1]

Boland found that the major cause of the growth in participation was an increase in the rate at which those families already eligible for benefits applied for and received them. She speculated that this increase in the participation (or take-up) rate was the result of government and interest group efforts in the late 1960s to destigmatize welfare and to make poor families aware that they were eligible for benefits. Boland also suggested that participation rates had peaked and that future growth of the magnitude of that which occurred during the 1967-72 period was unlikely.

Boland's work was revised and updated as part of another Urban Institute TRIM project completed in 1980 for the Office of the Assistant Secretary for Planning and Evaluation (ASPE) in the Department of Health and Human Services (HHS). A paper written by one of the authors of the current report (Michel) confirmed Boland's finding concerning the growth in

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1. See Barbara Boland, "Participation in the Aid to Families with Dependent Children Program" in Studies in Public Welfare -- the Family, Poverty and Welfare Programs, Paper No. 12, Part I. U.S. Congress Joint Economic Committee, Subcommittee on Fiscal Policy. Washington, D.C., 1973.

the rate at which families participated in the AFDC program. It also suggested that all future growth would be limited to that caused by changes in policy, such as benefit increases, or by demographic trends, such as shifts in fertility and divorce rates.[2]

The Michel paper, which tracked participation over a longer period than the Boland piece, found that while participation rates in the Unemployed Parent segment of AFDC were quite volatile and responded dramatically to economic conditions, participation rates in the basic portion of the program, which consists overwhelmingly of female-headed families, had achieved some stability in the late 1970s. The paper estimated that by 1977, 94 percent of all families eligible for benefits in the basic portion of AFDC were receiving them. Furthermore, this participation rate was not expected to change very much during the 1980s.

Indeed, the expectations in the Michel paper were temporarily confirmed by subsequent unpublished estimates of participation done for HHS/ASPE and the Congressional Budget Office using simulations from the TRIM2 model. Simulations for 1979 and 1980 showed that participation in the basic portion of AFDC remained in the 90 percent or above range.[3] These participation rate estimates, regarded by most analysts as representing a saturation level, became part of the conventional wisdom

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2. See Richard C. Michel, "Participation Rates in the Aid to Families with Dependent Children Program, Part I: National Trends from 1967 to 1977." Working Paper 1387-02. The Urban Institute: Washington, D.C., 1980.

3. See Table 2.1 in Chapter II.

about the AFDC Program. Much of the policy discussion concerning the program assumed that participation levels would remain relatively high.

Origins of the Current Study

This conventional wisdom about participation rates in AFDC was shattered by subsequent simulations of the eligible population using CPS files for calendar years 1981 and after. The simulations, when combined with program participation data, showed rates in the basic AFDC Program dropping from 90 percent in 1980 to 83 percent in 1981 and then to 78 percent in 1982. Subsequent simulations for 1983 and 1984 yielded participation rates of 78 percent and 82 percent, respectively, for the basic portion of the program. The implication was that there had been a dramatic decline in the rate at which eligible AFDC families were applying for and receiving benefits.

There were four possible explanations for this phenomenon, two of which reflected real behavioral changes and two of which were the result of data base or modelling changes. The four hypotheses were:

1. The estimates could have been affected by a change in the way subfamilies were coded by the Census Bureau on the Current Population Survey, the basic input file used to compute eligibility;

2. The behavior of AFDC recipients and potential recipients could in fact have changed, possibly as a result of the legislative changes in the program that occurred in 1981-1982;

3. The nature of the eligible population itself could have changed, at least partly as a result of the severe recession experienced in the early 1980s, which may have created many new eligibles with no history of welfare recipiency;

4. The change in the estimated participation rate might have been due to some change or flaw in the estimating methodology.

The Subfamily Coding Change

A priori, the second and fourth hypotheses did not appear likely. Most examinations of the effects of the 1981-82 legislation indicated that they caused only modest changes in the AFDC Program and that those that did occur might have been expected to raise rather than lower participation rates since the remaining eligibles tended to have very low incomes and no earnings. Further, the TRIM2 model itself had been altered in 1979, well before the fall-off in participation rates began in 1981. The third hypothesis seemed plausible but the continued low estimate of participation in 1984, when unemployment was significantly lower, implied that the economy was not the major factor in driving down rates.

The analysis completed for this paper thus focused on the first hypothesis, the change in the coding of subfamilies on the CPS files. This was first hypothesized as a source of potentially significant error by analysts at HHS/ASPE and at the Office of Management and Budget in the Executive Office of the President. The change seemed relatively simple: Census coders began using information already contained on the CPS interview form to link parents to children in households that contained children who were related to but not the child of the household head. An example would be an elderly couple who lived with their young adult daughter and their daughter's child. Previously, the child would have been identified as a related but non-own child of the elderly couple. But the

pre-1981 CPS file might not have identified the daughter of the couple as the child's mother. After 1981, the daughter and her child were linked together and identified as a separate subfamily, and the household would now appear to contain two family units rather than one.

Because the number of subfamilies on the CPS had been relatively stable over the previous fifteen years, Census analysts did not expect this coding change to have a very large impact. But between the March 1981 and the March 1982 CPS, the number of subfamilies grew from 1.2 million to 1.9 million. And by March 1983, when the coding change was completely implemented, the number of subfamilies stood at 2.2 million. There is no doubt that a change of this magnitude would affect simulations of AFDC eligibility since subfamilies may be independently eligible to participate in the AFDC Program even if the larger household or family is not.

Once the size of the subfamily change became apparent, the current study focused much of its remaining analysis on the coding issue and how it affected the AFDC Program. There were three areas of concern:

1. How much would this change affect measured participation rates?
2. To what extent would the characteristics of the eligible population be altered by this change?
3. How likely was it that these newly identified subfamilies would participate in the AFDC Program?

The next three sections report on the findings with respect to each of these three questions.

Revised Estimates of AFDC Participation Rates, 1967-1984

The subfamily coding change added approximately 500,000 families to the TRIM2 AFDC eligibility simulations between 1980 and 1982. However, there is no way of knowing precisely how many subfamilies would have been added to the eligibility simulations had the coding change been implemented earlier, in the 1960s or 1970s. Thus, in order to reestimate true participation rates in this earlier period, it was necessary to develop a methodology which approximated the number of subfamilies that might have been missing during the period from 1967 to 1980.

The methodology developed was based on vital statistics data from the National Center for Health Statistics. In general terms, the calculations assume that the number of subfamilies added to the AFDC eligibility simulations would have been proportional to the number of births to unmarried women during this period. This proportion was refined by using disaggregated data broken down by age and race.[4]

The results showed that between 150,000 and 400,000 subfamilies should have been included in the eligibility estimates between 1967 and 1980, depending on the year. The revised participation figures confirmed the earlier findings of Boland and Michel that there was a sharp increase in participation rates between 1967 and 1972 and a stabilization of rates in the late 1970s.

The recast figures, however, indicate that participation rates in the mid- to late 1970s were eight to ten percentage points below what was

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4. The full methodology is described in Chapter III of this report.

previously believed. For example, for 1979 and 1980 the revised figures showed participation rates in the basic portion of the program were 84 percent and 82 percent, respectively, rather than the 91 and 90 percent previously estimated.

This change eliminated the sharp downward trend in participation rates implied by the unadjusted estimates from TRIM2. Instead of the participation rate for the non-UP portion of the program dropping seven percentage points to 83 percent between 1980 and 1981, it actually rose by one point. And while there still was a dip into the high 70s for 1982 and 1983, estimates for 1984 show that participation rates in the basic portion of the program had once again increased to 82 percent, or about the same level as in 1979 and 1980.[5]

These results imply that there was no massive behavioral change on the part of AFDC eligibles in the early 1980s. However, they also create the possibility that comparative analyses of the AFDC Program which encompass the period before and after the coding change might be impaired by the impact of the change. They also show that participation rates are much lower than previously believed and are perhaps not at a saturation level as argued by Boland and Michel in their earlier analyses. The current project therefore examined the characteristics of the newly simulated eligible subfamilies, and considered the impact of changes in these characteristics

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5. The transitory decreases during the 1982 and 1983 period are thought to be due in part to a lagged response to economic conditions and to the implementation of changes to AFDC contained in the Omnibus Budget Reconciliation Act of 1981. See the discussion at the end of Chapter III.

on perceptions about the full population of eligibles. Further, the project looked at subgroup participation rates to determine whether in fact these subfamilies were already participating in the AFDC Program.

Trends in the Characteristics of AFDC Eligibles, 1979-1984

The very general demographic and income characteristics of all AFDC eligibles displayed no dramatic shifts in the period between 1979 and 1984. There was a slight increase in the percentage of eligible families headed by females and a sharper increase in those families headed by black females. There was also a slight downward turn in the average age of female heads, again sharper among black female heads than among whites. But for the most part, the mean sex, age, and income characteristics seem fairly constant over this period.

This constancy disappears, however, when more detailed distributions of characteristics are examined. In particular, the following three findings are observed after 1980:

1. More eligible female heads were young. The proportion of white female heads between 15 and 19 rose from four percent in 1980 to eight percent in 1981. The proportion of black teenage heads rose from two percent to ten percent in that one year.

2. More eligible female heads were never married. The proportion of white never married heads rose from 17 percent in 1980 to 22 percent in 1981 and 28 percent in 1982. The proportion of black never married heads rose from 38 percent in 1980 to 55 percent in 1981 and 58 percent in 1982.

3. More eligible heads tended to live in households with higher annual income and contributed a lower percentage of total household income. For example, the proportion of white

female heads living in households where annual income exceeded $30,000 rose from four percent in 1980 to seven percent in 1981 and the proportion contributing more than 80 percent of the household's income dropped from 75 percent in 1980 to 66 percent in 1981.

Examinations of the distribution of the characteristics of eligible subfamilies over this same period from 1979 to 1983 indicates that the shift in the post-1980 characteristics of the full eligible population was in fact driven by changes among subfamilies. Four findings are of particular interest:

1. After 1980, more eligible subfamily heads were young. The proportion of white teenagers heading AFDC subfamilies rose from nine percent in 1980 to 22 percent in 1981. The proportion of black teenage heads rose from six percent to 28 percent in that single year.

2. More eligible subfamily heads had a child under six years of age after 1980. The proportion of white subfamily heads having a young child rose from 68 percent to 76 percent between 1980 and 1981. The proportion of black subfamily heads having a young child rose from 71 percent to 85 percent.

3. The number of subfamily heads reporting themselves as never married increased dramatically between 1980 and 1981. Among white females, the proportion rose from 13 percent to 34 percent. Among black females, the proportion rose from 24 percent to 80 percent. By 1983, the two proportions were 45 percent and 83 percent, respectively.

4. Subfamilies tended to be living in higher income households after 1980 and were less likely to contribute the bulk of a household's income. For example, the proportion of white female subfamily heads living in a household where annual income exceeded $30,000 increased from 18 percent to 25 percent between 1980 and 1981 and the proportion of black female subfamily heads contributing less than 20 percent of a household's income increased from 33 percent to 46 percent in that one year.

AFDC Participation Rates in 1983 and Implications for Policy and Research

What implications do these results have for policy and research? The answer to some extent depends on how many of these subfamilies are already participating in the AFDC Program. For example, while most of the newly discovered subfamilies reside in households whose incomes appear to be below the relevant AFDC breakeven levels, a substantial portion of them are in households whose annual income is relatively high. Policy options that might be considered therefore include changes in AFDC eligibility criteria which would limit the possibility that families may receive benefits they may not require.[6] However, it is not clear a priori how much of an impact any such changes would have on program caseloads and costs, since not much is known about the participation behavior of such AFDC units. If they do not participate in the program in any significant numbers, a policy change, while it may be good for other reasons, would not substantially reduce caseloads or costs.

For that reason, the project compared participation data from the AFDC Quality Control Survey for 1983 with the TRIM2 eligibility simulations in that year to determine if the subgroups which make up the major shares of AFDC-eligible subfamilies participate in low or high numbers. This effort was complicated by the lack of comparability between the two data bases and by small sample sizes among some subgroups. But it did reveal a limited number of interesting results.

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6. In 1984, for example, the Deficit Reduction Act required the deeming of parents' income to all AFDC mothers between the ages of 15 and 17 who lived at home. These provisions might be extended to other age groups.

The major results are consistent with previous research. Families headed by black females participate at a significantly higher rate than families headed by white females (81 percent vs. 62 percent). Families headed by a female who reports never having been married participate at almost twice the rate of families headed by all other females, regardless of race (87 percent vs. 51 percent for white females and 97 percent vs. 50 percent for black females).

Among the age groups, there is no discernible pattern. A priori, it might be expected that, if participation is related to the fertility period of the mother and the age of her children, then the pattern of rates would increase through peak child-bearing years and begin to taper off as the children mature and become ineligible for benefits. In fact, families headed by teenage mothers of both races participate at lower rates than all other age groups. But while participation probabilities among black females follow the expected bell-shaped pattern, peaking in the 30-34 age range, participation probabilities among white females peak in the 20-24 age range and fall consistently thereafter.

There are several observations to be made from this with respect to the subfamily issue. Eligibility data from the CPS indicated that the newly-found subfamilies were more likely to be young, more likely to be black, and more likely to have never been married than the majority of the AFDC eligible population. The participation probabilities for race and marital status groups indicate that black females and never married females have a higher than average probability of participating in the program.

Teenagers in general but white teenagers in particular have a lower probabilty of participating. And higher income families have a very low probability of participating.

Since most of the subfamilies who were added to the eligibility simulations as a result of the coding change were black and unmarried, it is highly likely that these newly-discovered eligibles were in fact already participating in the AFDC program. The possibility of a rapid expansion of program participation among this group, akin to the growth which occurred in the whole program during the period between 1967 and 1973, is negligible.

There is some possibility for growth in participation among teenage eligibles, but this group is currently a relatively small part of the eligible population, making up only about five percent of all eligible families. Thus, the potential cost impact of a behavioral change among eligible teenage mothers is relatively small. Furthermore, at least some of these teenagers are imbedded in larger households with relatively high incomes which were excluded from eligibility by changes to the law implemented in 1984. Also, if the remaining AFDC units in these higher income households behave in manner similar to relatively higher income pure AFDC households, the chances of an increase in participation among this group is quite small. Thus, it remains unclear as to whether any policy changes to curb potential program growth are necessary at this time.

The implications of this dramatic increase in the number of identified subfamilies on CPS files also have some potentially important implications

for the research community. These implications extend beyond analyses of the AFDC Program to analyses of the poverty population and of general demographic trends in household formation and structure.

But several important questions about both general demographic trends and the significance of subfamilies among AFDC participants remain unresolved by the limited scope of the current study. These questions can be classified into three areas, moving from the general to the specific:

- General Demographic Trends. Did the coding techniques prior to 1981 mask a general trend toward more multi-generational households in the 1970s? If so, what were the causes of this trend and has the trend had a positive or negative effect on the well-being of families?

- Analyses of Poverty Trends. What effect did the coding changes have on the poverty counts provided annually by the Bureau of the Census? Between 1980 and 1981, for example, the number of families in poverty rose from 6.2 million to 6.9 million. How much, if any, of this change was due to the subfamily coding changes?

- Analysis of AFDC Policies. How many of the eligible subfamilies identified by the current study actually participate in the AFDC Program? Would changes in program policy which extend the 1984 deeming provisions to non-teenage AFDC units result in substantial cost reductions? Or will the effects be relatively small?

There are data bases and methodologies available which can help illuminate these issues, if not totally resolve them. The report notes a few directions that might be pursued and recommends doing so as resources become available.

I. INTRODUCTION AND BACKGROUND

This report presents the findings of a new study of participation rates in the Aid to Families with Dependent Children (AFDC) program over the 1967 through 1984 period, which was undertaken for the Office of the Assistant Secretary for Planning and Evaluation (ASPE) of the Department of Health and Human Services (HHS) under contract HHS-100-84-0032. This study has had two major aims: to bring estimates of participation rates up to date, by computing new estimates for 1979 through 1984; and to correct our pre-1981 estimates for some anomalies in data collection and coding that have been discovered in the Current Population Survey (CPS), the basic input file used to estimate the number of families eligible to participate in AFDC. In addition, this study has analyzed changes in the characteristics of eligible families and has briefly examined participation rate differences occurring among specific population subgroups within the eligible population as a whole. Each of these topics is discussed in some detail in the remaining chapters of this report.

Background: The Need for Participation Rate Estimates

Before turning to these issues, however, it may be useful to review briefly the rationale for computing participation rates in general, and the past work that has been done in this area. Estimates of participation rates in basic transfer programs such as the Aid to Families with Dependent Children (AFDC) program may be of interest to researchers and policy makers for several different reasons. First, participation rate estimates provide

a measure of program effectiveness and program targetting--they tell us whether a small or large proportion of those technically eligible for a given program actually participate in it. This in turn can help us to assess both the need for and the success of program outreach efforts.

Second, trends in participation rates may allow us to track the impacts of changes in the program and in the eligible population over time. This can be particularly important in periods when several different changes that could affect eligibility and participation are occurring simultaneously. For example, during the 1981-1982 period, substantial changes in AFDC rules and administrative procedures occurred at the same time as a major slowdown in the economy. In order to sort out the effects of these various changes, it is helpful to have information not only on the total number of AFDC participants, but also on the number of potential participants--i.e., the eligible population.

Finally, participation rate estimates may also be useful to policy makers in attempting to forecast the impacts of potential legislative changes on program participation and costs. Because eligibility determinations are relatively independent of individuals' and families' short-run behavioral decisions, it is often easier to estimate how many units will gain or lose eligibility as the result of a given change than it is to estimate changes in program participation directly. In cases of this sort, it is helpful to have access to a range of recent participation rate estimates, which may then be used to estimate the proportion of new eligibles who would in fact participate in the program.

Past Studies of Participation Rates in AFDC

For all these reasons, then, participation rate estimates are an important tool of program analysis. Unfortunately, however, participation rates cannot always be estimated easily, since for most programs there is no direct measure of the number of eligible family units. For the AFDC program, past attempts to solve this problem have for the most part relied on microsimulation techniques.

Using a large-scale microsimulation model which includes detailed information on the incomes and other characteristics of a large sample of U.S. households, it is possible to calculate how many families would in fact be eligible to receive benefits from AFDC or other transfer programs. The Urban Institute's microsimulation model, known as the Transfer Income Model, or TRIM, uses input data on the incomes and other characteristics of families and households from the Bureau of the Census' Current Population Survey (CPS). Program rules for AFDC and other programs are then applied to these data to determine which families or households would be eligible to participate in which programs.[1] Finally, these estimates of the total eligible population for a given program may be compared to program data on

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1. The TRIM (and later TRIM2) models used to estimate the number of AFDC eligible units are large-scale microsimulation models that use input data on the incomes and other characteristics of households as a basis for simulating their eligibility for and receipt of various transfer program benefits. (TRIM2 also simulates taxes in some detail.) Details on the construction and operation of these models will not be presented in this paper, which assumes some acquaintance with microsimulation methods in general and with TRIM in particular. Readers unfamiliar with the model should see Randall Webb et. al., "TRIM2 Reference Manual: The Framework for Simulation", Urban Institute Working Paper 3069-01, March 1982 (with updates). Chapter I, which presents an overview of TRIM2, is particularly helpful in understanding the general operation of the model.

the actual number of participants reported in that program, to calculate a program participation rate.

The use of such a model, in conjunction with program data on participants, to calculate AFDC participation rates was pioneered by Barbara Boland in 1973.[2] Microsimulation models have been considerably updated and improved since the Boland paper, but her general finding, that AFDC participation rates rose substantially from the mid-1960s through the early 1970s, particularly for female headed families, still holds. Overall, she estimated that participation rates had risen from about 56 percent in 1967 to about 78 percent in 1970.

Boland's work was updated, corrected and expanded upon in a major study undertaken by Richard C. Michel and Patricia Willis of The Urban Institute for the Office of the Assistant Secretary for Planning and Evaluation (ASPE) of the Department of Health and Human Services (HHS). This study, completed in 1980, produced AFDC participation rate estimates for the period 1967-1977.[3] Like the Boland study, the Michel study found a generally rising trend in participation rates, especially over the first half of the 1967-1977 decade. After reaching a peak of about 92 percent in 1972, however, estimated participation in the basic AFDC program (not

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2. See Barbara Boland, "Participation in the Aid to Families with Dependent Children Program", in Studies in Public Welfare--the Family, Poverty, and Welfare Programs, Paper no. 12, part I. U. S. Congress, Joint Economic Committee, Subcommittee on Fiscal Policy: Washington, D.C. 1973.

3. See Richard C. Michel, "Participation Rates in the AFDC Program, Part I: National Trends from 1967 to 1977"; Richard C. Michel and Patricia Willis, "Participation Rates in the AFDC Program, Part II: State Rates in 1975"; and "Participation Rates in the AFDC Program, Part III: AFDC Program Determinants of Eligible Families' Decisions and State Participation Rates".

including the Unemployed Parents (UP) segment) declined slightly over the next two years, to about 87 percent overall in 1974, before rising again to a new peak of about 94 percent in 1977. (Participation rates in the UP program were found to be significantly more volatile than those in the basic AFDC program, but because UP was so small relative to the rest of the program its fluctuations had relatively little impact on participation rates for the program as a whole.)

Michel's work corrected the Boland estimates for a number of small problems, chiefly relating to the estimated number of program participants, and also incorporated eligibility estimates based on a significantly improved microsimulation model. Nevertheless, as discussed above, his findings generally confirmed Boland's as to the rapidly rising trend in participation through 1970, although some small differences in levels were found. This trend continued through 1972, but Michel's results for the next five years appear to indicate that over this period participation held fairly steady, in the range of about 90 percent overall. On the basis of these results, it was possible to hypothesize that participation rates had stabilized because the program had in essence reached a saturation point for the eligible population as a whole—allowing for some relatively minor fluctuations, virtually all of those potentially interested in participating in the program were probably doing so. Given these findings, there was no reason to expect further major changes in participation over the next five years.

Under these circumstances, therefore, the production of preliminary participation rate estimates for 1979 through 1982 showing a decline in participation rates from about 94 percent to about 78 percent came as quite

a surprise. These estimates were produced by Michel et. al. at The Urban Institute at the request of ASPE, and used the same methodology and data sources as had the earlier estimates. After almost a decade of participation rate estimates in the neighborhood of 90 percent or more, this sudden and rather precipitous decline seemed to call for some explanation. A desire to understand this decline provided the original motivating force behind the present participation rate study.

Developing New Participation Rate Estimates for AFDC: Aims of the Current Study

As outlined above, the apparent sudden decline in AFDC participation rates seen in 1981-1982 seemed to call for some investigation. Four major theories were advanced by researchers at The Urban Institute and by ASPE that might have explained some or all of the observed shift. These were:

- The estimates could have been affected by a change in the way subfamilies were coded by the Census Bureau on the Current Population Survey, the basic input file used to compute eligibility;
- The behavior of AFDC recipients and potential recipients could in fact have changed, possibly as a result of the legislative changes in the program that occurred in 1981-1982;
- The nature of the eligible population itself could have changed, at least partly as a result of the severe recession experienced in the early 1980s, which may have created many new eligibles with no history of welfare recipiency;
- The change in the estimated participation rate might have been due to some change or flaw in the estimating methodology.

The purpose of this study was to examine each of these possibilities in turn.

Of these four possibilities, the one that could most easily be refuted was the last, that the apparent change was due to some change or problem in

the estimating methodology. Although substantial changes have been made recently in the Transfer Income Model (known as TRIM) which was used to estimate the number of AFDC eligibles, these changes are unlikely to have been the cause of the observed changes in estimated participation, since they primarily affected the transition from the 1977 to 1979 files. (Although various files were constructed for 1978 using both versions of the model, final versions were not saved and reproducing them was not within the scope of the current project.) From 1979 onward, the new version of the model, known as TRIM2, was consistently in use. As Table 1.1 shows, the observed decline in participation rates did not occur until well after 1979—the decline effectively starts in 1981, and becomes more pronounced the following year.[4] The 1979 and 1980 estimates are well within the range that had been typical in the preceding several years. Since all of the estimates from 1979 onward were produced using the same model, and in fact, using identical programs, we felt confident that the decline seen in the later years was not an artifact of program or model changes.

Although intentional changes in the model or the estimating methodology could be ruled out as a source of the changes, there was always the possibility that errors or unintentional changes were a contributing factor. Given the persistence of the low estimates in 1981 and beyond, these errors would have had to have been quite systematic in nature to account for the observed pattern. Further, any errors would have had to

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4. The participation rates shown in Table 1.1 and referred to here are preliminary rates, unadjusted for any of the other factors discussed above. They are compared to an adjusted series in Chapter III of this report.

Table 1.1

Preliminary Estimates of Participation Rates in the Basic AFDC Program, Unadjusted for Coding Changes[a]

Year	Number of Eligible Units	Number of Participating Units	Estimated Participation Rate
1975	3,550	3,239	91%
1976	3,546	3,334	94%
1977	3,550	3,343	94%
1979	3,631	3,291	91%
1980	3,848	3,453	90%
1981	4,237	3,513	83%
1982	4,207	3,302	78%
1983	4,331	3,402	79%
1984	4,213	3,435	82%

a. Numbers of units (families) in thousands.

SOURCE: Eligibility data from Urban Institute TRIM2 simulations based on the March Current Population Survey and participation data from the Social Security Administration Office of Family Assistance based on program statistics reported by the states.

have occurred either in the basic model parameters themselves or in the participation estimates, in that, as discussed above, the estimating methodology was unchanged from year to year over the 1979 through 1984 period. Accordingly, a complete review and updating of the model parameters affecting the AFDC estimates—for example, state by state need standards, payment standards, allowed deductions, and so forth—was undertaken. Participation figures, which were taken from program data, were double-checked with the Office of Family Assistance. Although these procedures did result in some minor changes in the estimates, there was no change in the general pattern observed.

Elimination of methodological differences as a primary source of changes in estimated participation rates left open the three other possible causes outlined above. One of these, the subfamily coding change, appeared from a preliminary examination of the data to be almost certainly at least a contributing factor in explaining the participation rate changes seen in Table 1.1. A decision was made to explore the impacts of this second technical change on estimated participation—thus producing estimates that were at least internally consistent—before turning to the two other, more substantive possibilities outlined above.

Accordingly, the next chapter of this report briefly outlines the subfamily coding changes that occurred in 1981 and 1982, and discusses their impacts on estimated participation rates. Chapter III goes on to produce re-estimated participation rates, adjusting for the probable under-reporting of subfamilies in the years before 1981. Although, as the re-estimates make clear, the subfamily coding changes do in fact account for a large proportion of the observed changes in participation rate estimates,

this chapter also explores the question of whether the small remaining fluctuations in participation rates can be explained by either economic or legislative factors.

As will be discussed in Chapter III, our re-estimated participation rates imply that there are in fact more eligible non-participants than had previously been thought. Chapter IV, therefore, goes on to explore the characteristics of eligible families and subfamilies and how these characteristics were altered by the coding change. Chapter V discusses some of the factors that appear to characterize those who do not participate in the program and the impacts that this might have on policy and research.

II. THE SUBFAMILY CODING CHANGE IN THE CPS AND ITS CONSEQUENCES FOR ESTIMATING AFDC PARTICIPATION

As discussed in the last chapter, a preliminary examination of the data implies that the technical changes occurring in 1981 and 1982 in the way subfamilies were recorded in the CPS were at least a contributing factor in explaining the measured decline in AFDC participation rates outlined in Chapter I. Figure I illustrates this point in more detail.

As the figure shows, up through calendar year 1980 (reported on the March 1981 CPS) the number of related subfamilies found in the CPS had changed very little.[1] Minor fluctuations occurred from time to time, but no particular pattern is evident. Then suddenly, between the March 1981 and March 1982 Current Population Surveys, the total number of related subfamilies reported went from about 1.2 million to almost 1.9 million—a one year increase of more than 50 percent. The number of related subfamilies reported increased again in the March 1983 survey, reaching a peak of just over 2.2 million. According to the two most recent surveys, the number of related subfamilies found has now stabilized once again at approximately this level.

How important was this increase in the context of overall AFDC eligibility and participation? Referring back to Table 1.1, it can be seen that before 1981, the total number of families and subfamilies estimated to be eligible for AFDC was generally between 3.5 million and 3.9 million. Clearly, then, if a substantial proportion of the 650,000 or so newly found

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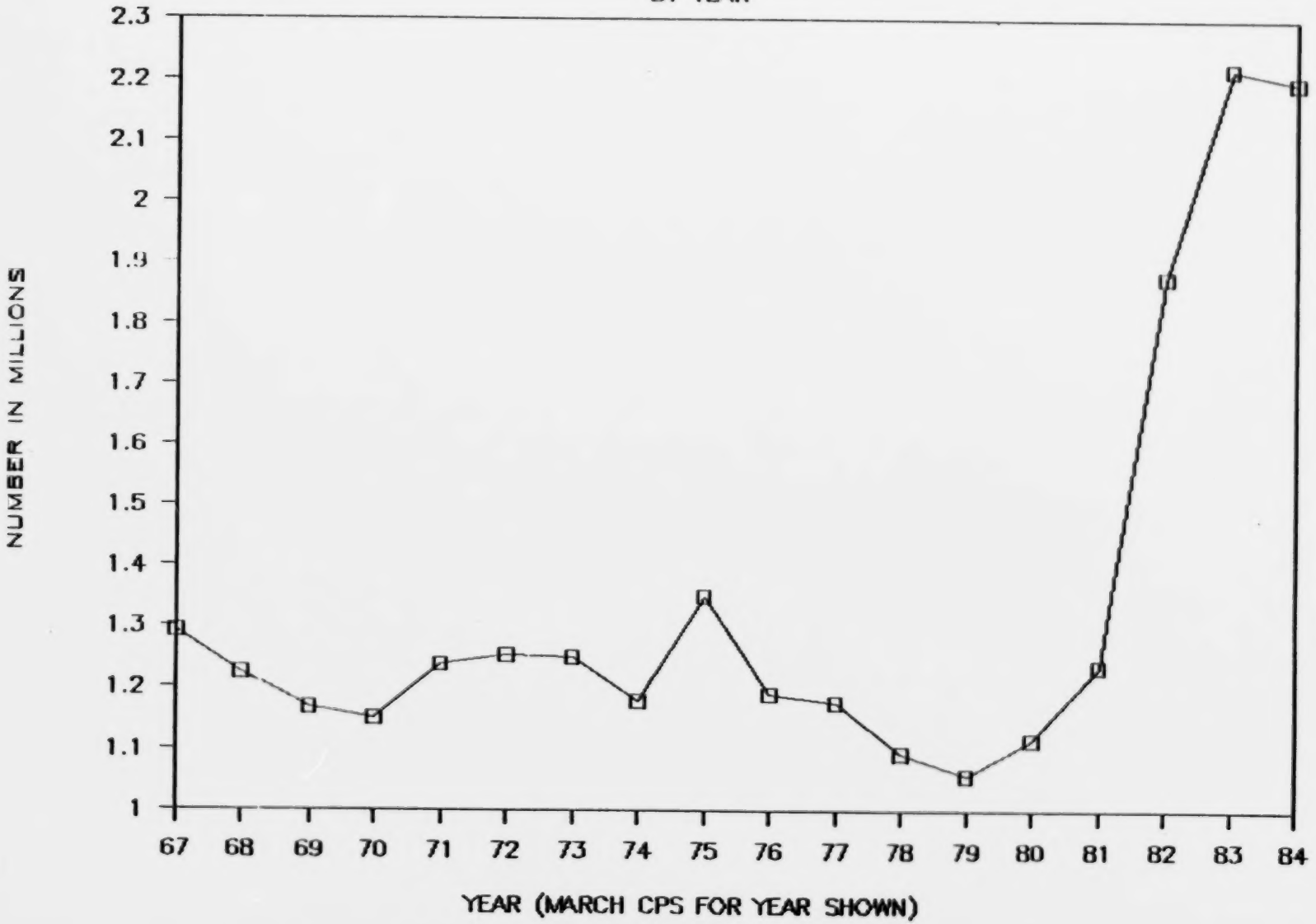
1. Related subfamilies include families of two or more persons within a larger household, whose head is a relative of the household head. Unrelated subfamilies (including for example boarders or lodgers with families of their own) also exist in the CPS, but their reported numbers were not affected by the coding change.

FIGURE 1: NUMBER OF RELATED SUBFAMILIES

BY YEAR



SOURCE: U.S. Department of Commerce, Bureau of the Census (October 1985) Series P-20, No. 402, Table 7

subfamilies were to be eligible for AFDC, their presence could result in a significant increase in the total number of program eligibles. Because estimates of the number of participants come from program data rather than the CPS, they would not be affected by this subfamily change, so any increase in eligibles resulting from this change would be directly mirrored in declining participation rate estimates.

This dramatic increase in the number of subfamilies made clear the need for a re-estimate of the total number of AFDC eligibles, holding constant the number of subfamilies. Before turning to those re-estimates, however, the next section briefly reviews the causes and general effects of the observed subfamily changes.

Background: Review of Subfamily Changes in the CPS

What caused the sudden change in the reported numbers of subfamilies occurring in 1981-1982?[2] The answer appears to be traceable to a series of coding changes that were phased in over the 1981 and 1982 Current Population Surveys (that is, those occurring in March of 1982 and 1983, respectively.) These changes were not expected to have any impact on the estimated number of subfamilies at all, since they involved no change in the survey interview questionnaire or in the data collection process itself. Rather, the changes occurred in the coding process, when data from the questionnaire were coded for each household. A change in the coding format that allowed intra-household relationships to be more fully identified resulted in an unanticipated increase in the number of

2. The discussion in this section is based on information provided by the staff of the Population Division, Bureau of the Census.

subfamilies appearing in the CPS, apparently because the coding change allowed certain persons who previously could not be seen to be related to be identified as subfamilies within the larger family unit.

This coding change, which also had the effect of reducing the coder's discretion in identifying subfamilies, particularly affected related subfamilies sharing a household with one or more other family members. A subfamily consisting of a single mother and her child, for example, who were living with the mother's own parents or other relatives, could potentially have been coded under prior practice as a child of the head and a second related child, rather than as a mother and child, since only the relationship to the household head had to be recorded. Under the new coding rules, intra-household relationships were more fully recorded, allowing the subfamily unit to be identified.

This coding change was particularly relevant for the purpose of estimating the number of AFDC eligibles, because a large proportion of the newly appearing subfamilies were categorically eligible for AFDC. In general, two-parent families would have been identified as subfamilies even under the old coding method, if for no other reason because the presence of a son-in-law or daughter-in-law in the household would almost always imply a marriage to a child of the head who was also present, and the two together would have been identifiable as a subfamily. The most common subfamily type to be added as a result of this change, therefore, was the single parent family--usually, a mother living with older relatives of her own and one or more minor children.

Impacts of the Subfamily Coding Change on Estimated AFDC Participation

As seen above, enough new subfamilies were in fact identified as a result of the coding change to have a potentially significant impact on total participation rate estimates. Further, there was some reason to believe that many of these subfamilies would be categorically eligible for AFDC. In order to determine the net impact of these newly identified subfamilies on participation rates, however, the number of subfamilies who were in fact eligible, taking into account both income and categorical factors, remained to be determined.

A first step in determining the impacts of the subfamily coding change on AFDC participation rate estimates, then, was to rerun the AFDC eligibility determination module in TRIM2, keeping families and subfamilies separate. The pre- and post-coding change estimates of the number of subfamilies were then compared. To obtain a rough estimate of the coding change impacts, we simply assumed that all of the increase in the number of AFDC eligible sub-families between 1980 and 1981 was the result of the coding changes. Similarly, because the changes were phased in over two years, we assumed that the further increase observed in 1982 was also due to the coding changes.

It could be argued that assuming the entire increase to be the result of the coding changes would produce biased or inaccurate estimates, if other factors also contributed to changes in the number of subfamilies over these two years. Indeed, we considered using a slightly more sophisticated methodology, which would first have imputed some underlying growth rate to subfamilies, and then calculated the residual increase and attributed that to the coding changes. As Figure I demonstrated, however, there is little

apparent underlying trend in the number of subfamilies recorded in the CPS before 1980.[3]

Once the total number of "extra" subfamilies resulting from the coding changes had been estimated, it only remained to subtract these from the 1981 and subsequent estimates of the eligible population in order to obtain an estimate of the impact of these coding changes on estimated participation rates. (Because the number of participants is estimated from program data rather than from the CPS, it would not be affected by the coding changes and thus would not need to be adjusted.) Table 2.1 shows the results of this calculation.

As Table 2.1 demonstrates, excluding the "extra" subfamilies resulting from the coding changes results in participation rate estimates that are almost identical to those seen in earlier years. The dip in participation rates seen in the unadjusted participation rates is completely eliminated. It should be noted that, as explained above, the number of "extra" subfamilies was only roughly estimated for this table, but nevertheless the conclusion that the technical coding changes were in fact the major cause of the apparent decline in participation rates seems inescapable.

The estimates shown in Table 2.1 are for the basic AFDC program only—they do not include the Unemployed Parents segment of the program. An examination of the subfamily increases by family type—one parent vs. two

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3. The one possible exception is that the number of subfamilies does appear to rise temporarily in periods of recession—in both the 1974-1975 recession and that of the early 1980s there are small upward spikes in the number of subfamilies. Although this factor was not controlled for in the rough estimates presented here, possible increases in the number of subfamilies because of unemployment were taken into account in the more sophisticated "backcast" estimates presented in the next chapter. This point is discussed in more detail there.

Table 2.1

Estimated Participation Rates in the Basic AFDC Program, Including and Excluding Newly Identified Subfamilies[a]

Year	TRIM2 Eligibles Including Subfamilies	TRIM2 Eligibles Excluding Subfamilies	Participants	Participation Rate With Subfamilies	Participation Rate Without Subfamilies
1979	3,631	3,631	3,291	91%	91%
1980	3,848	3,848	3,453	90%	90%
1981	4,237	3,839	3,513	83%	92%
1982	4,207	3,686	3,302	78%	90%
1983	4,331	3,778	3,402	79%	90%

a. Number of units (families) in thousands.

SOURCE: Eligibility data from Urban Institute TRIM2 simulations based on the March Current Population Survey and participation data from the Social Security Administration Office of Family Assistance based on program statistics reported by the states.

parent subfamilies--indicated that they had no perceptible effect on the number of two-parent subfamilies reported. Because families must have two parents, at least one of whom is unemployed, as well as one or more dependent children in order to qualify for the UP program, the fact that two-parent subfamilies were not affected by the coding change meant that there was also no impact on the estimated number of families eligible for UP. As a result, participation rate estimates for UP were unaffected by the coding changes.

Problems with These Adjusted Participation Rates

The changes in subfamily coding on the CPS do appear to explain most of the apparent decline in participation rates observed in the recent past. The adjusted participation rates (excluding subfamilies) shown in Table 2.1 are clearly in the same range as are estimates for earlier years.

The major problem with the estimates shown in Table 2.1 is of course that, while they are comparable across the years, they are not in some sense "true" participation rates, in that they are known to exclude a portion of the eligible population--those subfamilies not picked up by the CPS prior to the coding changes.

It should be noted here that a "true" participation rate is probably unobtainable, in the sense that some uncertainty will always be attached to the specific levels of participation estimated using a simulation methodology. Because the estimated numbers of eligibles and participants come from very different data sources, which use different sampling techniques and reference periods, the levels estimated will always be at best rough approximations, although the trends shown over time are probably

reliable (in the absence of major technical changes).[4] Nevertheless, exclusion of a known portion of the eligible population such as subfamilies may not only result in unnecessary distortion of the estimated participation levels, but may also distort the trends observed over time, if changes in the numbers of eligible subfamilies do not exactly parallel those in the larger eligible population as a whole. Because, as discussed above, the excluded subfamilies consist almost entirely of female-headed single-parent units, a population subgroup which has grown very rapidly over the past two decades, it is very likely that excluding them from our adjusted participation rate estimates would in fact bias not only our estimated levels of participation but also the trends observed over time.

If internally consistent participation rate estimates are to be produced, however, the only alternative to excluding these subfamilies is to develop a methodology for estimating how many of them may have been excluded by the CPS in the years before the coding change. Once estimates of the number of such excluded subfamilies have been produced for the years before 1981, they can be added into the existing estimates for the total number of eligibles, and total participation rate estimates can be produced. The next chapter, therefore, first discusses the development of such a methodology, and then produces estimates of total participation rates including the previously excluded subfamilies.

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4. For more discussion of this point, see Richard C. Michel, Op. Cit., Chapter III. Additional work on the evaluation of errors in microsimulation modeling is being undertaken for HHS/ASPE by Rodger Kormendi of the Mid-America Institute for Public Policy Research.

III. REVISED ESTIMATES OF AFDC PARTICIPATION RATES, 1967 - 1984

The aim of this chapter is to produce revised participation rate estimates, taking into account the subfamilies who were not identified as such by the CPS before the 1981-1982 coding changes. Estimating the total number of such unidentified subfamilies for the years before 1981 is a somewhat difficult task, however, since few clues exist in the data themselves as to how many there may have been in each year. Although records for the individuals who make up these subfamilies do appear, it is very difficult to tell which individuals are in fact subfamily members, and which are simply otherwise unattached children or unmarried adults who happen to be living with relatives. In other words, if a child who is, for example, the grandchild or the niece of the household head appears in the household, there is no direct way to tell if that child is in fact being cared for by the household head, or if, on the other hand, the child's parent is also in the household.

Given these difficulties, developing a methodology for estimating the number of subfamilies that might have been missed is not entirely straightforward. The next section of this chapter briefly discusses some possible alternatives, and outlines the rationale for the methods that were chosen. The following section discusses the methods used in detail, and presents the resulting estimates of the total number of AFDC-eligible subfamilies over a span of years from 1967 to 1981. The third section uses these estimates, in combination with other data on eligible and participating family units, to "backcast" participation rates in the AFDC program over time. The final section discusses the implications of these results.

Alternative Methods for Estimating the Number of AFDC-Eligible Subfamilies Missed in the CPS

Several possible methodologies could be used to estimate how many subfamilies were not identified in the CPS in the years before 1981. For example, as the discussion above indicates, it would theoretically be possible to go through each year's CPS in turn, examining all families containing related children who are not the children of the head, and making some assumptions on this basis as to the proportion who were in fact subfamily members. This approach would have two major drawbacks, however. First, some of these related children would not in fact have been in subfamilies, and there is no way to tell from the data available which were and which were not. The presence or absence of other unattached adults in the household is not necessarily a reliable indicator, since in some proportion of cases the parent of the related child would in fact have been another child. Because typical family living arrangements vary across time and across different social groups within the population, it would not even be safe to assume that subfamilies account for a constant proportion of all observed families with related children who are not the head's own.

These problems would make the simulation of additional subfamilies based on the information reported in the CPS a difficult task, and one that might not produce very reliable results. In addition, however, constructing such a simulation and running it not just under the TRIM2 model for the 1979 and later CPS files, but also under the old TRIM model used to produce estimates in 1967 through 1977, would be both very time-consuming and extremely expensive. Given the resources available for this task, we did not feel that this would be a feasible methodology.

An alternative, much simpler methodology would involve extrapolating backward the total number of subfamilies observed in 1981-1982, assuming that they make up a constant proportion of all AFDC eligibles. This methodology was also judged to be unsatisfactory, however, because there is substantial evidence that there has been a considerable growth in the number of such subfamilies in the recent past. As discussed in the last chapter, these previously unidentified subfamilies overwhelmingly consist of single parents and their children. Given the rapid increase in such family units in the population as a whole over the past two decades, it seems reasonable to assume that they have also increased as a proportion of all subfamilies. Extrapolating backward based on the relative proportions seen in 1981-1982 could be misleading, therefore.

Instead of adopting either of these two methods of estimating the number of subfamilies missed by the CPS, we decided to pursue a middle course. Specifically, we believed that an aggregate-level adjustment would be preferable to a micro-level simulation, given the relative lack of data on subfamily characteristics in pre-1981 CPS files, the large number of years for which adjustments would have to be made, and the time and resource constraints involved. On the other hand, it was clearly necessary to find some way to take the demographic and economic changes that occurred over the 1967 through 1981 period into account in projecting our estimated total number of unidentified subfamilies backward over time.

We therefore developed a third methodology that was essentially a compromise between the two approaches outlined above. This methodology involved projecting backward the distribution of AFDC-eligible families and subfamilies by type seen in 1981-1982, adjusting for changes in the

demographic composition of the population as a whole. Specifically, we assumed that the growth in the number of AFDC-eligible subfamilies that was seen over time would be approximately proportional to the growth in the birthrate seen in the specific demographic groups that make up the AFDC-eligible population. Using this assumption, we could project backward the number of eligible subfamilies in any given year by adjusting the 1981 estimate downward for each demographic subgroup (defined by race and age) in proportion to the relative birthrates for that group in 1981 and the year to be estimated.

Once demographically adjusted estimates had been produced, the estimated number of subfamilies in each year was further adjusted to take into account fluctuations resulting from year to year differences in economic circumstances. Finally, the adjusted subfamily estimates for each year were added back into the estimated numbers of eligible families produced earlier by TRIM and subsequently by TRIM2, to arrive at an adjusted total number of eligible units. This total was then compared to adjusted participation totals taken from AFDC program data, in order to arrive at a complete participation rate estimate.[1]

This method of projecting participation rates backward over time has the merit of taking into account all of the significant known causes of variations in the number of eligibles, without calling for a major re-simulation of almost 20 years' worth of data. Nevertheless, the method is somewhat complex to implement and to understand, and does depend on certain

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1. Participation estimates were produced for all years since 1979 (through 1984) and for every third year between 1967 and 1979. Limitations on both data and resources prevented us from producing estimates for every year during the 1970s, but the existing estimates make the overall trend fairly clear.

key assumptions. The next section of this chapter therefore goes through the necessary calculations in some detail, and discusses the importance and the plausibility of the assumptions that underlie each.

Estimates of the Number of AFDC Eligible Subfamilies, 1967-1981

As discussed above, the revised estimates of the number of eligible subfamilies of various types were largely based on ratios of eligibles in each year to be estimated and in 1981, with adjustments for both demographic and economic factors. 1981 was thus the base or comparison year for most of the calculations performed. Although there was some further increase in the total number of related subfamilies between 1981 and 1982, after close examination of the data we came to the conclusion that most of this increase could be accounted for by economic circumstances. Specifically, the recession of 1982 was unusually severe and appears to have created a number of new subfamilies, which were for the most part headed by married couples and were not AFDC-eligible.

Possibly because of the legislative changes that also went into effect that year, the number of AFDC-eligible subfamilies in 1982 does not appear to have been significantly higher than in 1981, and the ratios of eligible subfamilies to all eligibles are essentially the same. Because of the unusual economic conditions and the legislative changes in AFDC, however, the use of 1982 as a base year for the backcast would have required more adjustments to the data, and would have been more difficult to implement in general. Given that we were not convinced, on the basis of the evidence, that the increase in subfamilies seen between 1981 and 1982 was related to the subfamily coding change, we decided to take the slightly more

conservative course of using 1981 as our base year for performing the backcast.

After choosing an appropriate base year from which to start the backcast, several more steps were necessary to achieve new participation rate estimates. In rough outline, these steps were:

1. Divide AFDC-eligible subfamilies observed in 1981 into those whose numbers probably varied systematically with trends in birth rates over time (subfamilies with unmarried female heads) and those that probably didn't (other subfamilies).[2]

2. Estimate the proportion of all eligibles represented by eligible "other" subfamilies—those without unmarried female heads. This proportion was found to be approximately 11 percent in 1981.

3. Assume that the proportion of eligible "other" subfamilies would have been approximately constant at this level over time, and subtract this estimated number of such subfamilies from the total number of eligible subfamilies to arrive at the number of eligible subfamilies headed by unmarried females that were reported in each year before 1981 [Column 2, Table 3.1].[3]

4. Estimate the "corrected" number of subfamilies with unmarried female heads by extrapolating backward from 1981, based on the rate of growth in the number of children born to unmarried women (by age and race). This was done in four major steps:

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2. This second group consisted of subfamilies with divorced or separated female heads or with married-couple or single-parent male heads. Although the divorce rate has increased over the last 15 years as well, possibly creating more subfamilies in this category, the evidence appears to indicate that such subfamilies were better identified under previous coding procedures than were those with unmarried female heads.

3. Unfortunately, in runs for earlier years estimates of the number of AFDC-eligible units reported by TRIM were not always broken down into families and subfamilies, so in many cases the total estimated number of eligible subfamilies actually reported in the CPS also had to be extrapolated backward, based on the total number of subfamilies reported and the total number of eligible units in that year. We do not believe that this process had a significant impact on the final estimates, however, since the possible bounds for the estimates were in most cases quite small, and the reported number of subfamilies appears to vary relatively little from year to year before 1981.

Table 3.1

AFDC-Eligible Subfamilies, by Type, With and Without Adjustments, 1967-1981
(Numbers in Thousands)

Year	(1) Reported Total Number of Subfamilies (Unadjusted)	(2) Unadjusted Number of Subfamilies Headed by Unmarried Women	(3) Demographic Adjustment Factor[a]	(4) Economic Adjustment Factor[b]	(5) Adjusted Number of Subfamilies Headed by Unmarried Women (504 times Column 3 times Column 4)	(6) Female Headed Subfamilies to be Added to Total (Column 5 minus Column 2)	(7) Adjusted Total Number of Subfamilies (Column 1 plus Column 6)
1967	280	0	.392	.833	165	165	445
1970	328	0	.485	.881	215	215	543
1973	391	32	.478	.881	212	180	571
1976	426	36	.571	1.004	289	253	679
1979	484	63	.779	.921	362	299	783
1980	552	87	.934	.998	470	383	935
1981	990	504	1.000	1.000	504	0	990

a. Weighted ratio of births to unmarried women in base year and in 1981.
b. Based on expected percentage changes in numbers of subfamilies associated with the percentage point change in the unemployment rate.

SOURCE: Eligible subfamilies from Urban Institute TRIM2 simulations based on the March Current Population Survey. Adjustment factors derived from Vital Statistics of the United States (annual). See text for derivation.

a. Calculate the ratio of births to unmarried mothers in each age/race group in the year to be examined to births for the analogous group in 1981.

b. Weight the resulting ratios by the proportion of all AFDC eligible female-headed units represented by each age/race group in 1981.

c. Sum across weighted ratios to arrive at a total ratio [Column 3 in Table 3.1].

d. Multiply this total ratio by the number of unmarried female-headed subfamilies in 1981, to arrive at a demographically-adjusted estimate of the number of such subfamilies in the year under examination.

(Appendix Table A gives full details on the age and race groups used and the ratios, weighted and unweighted, calculated for each.)

5. Adjust the demographically-adjusted estimate of the number of eligible subfamilies headed by unmarried women for fluctuations in economic circumstances over time as well.[4] Since the numbers involved were relatively small in any case, and a highly sophisticated adjustment did not seem justified in terms of the difference that it would potentially make to the estimates and the resources it would require, changes in unemployment rates were used as a proxy for economic fluctuations in general. The adjustment was done in three steps:

   a. The impact of unemployment on the number of AFDC eligibles was estimated by regressing unemployment rates and other relevant variables on total AFDC eligibility. It was found as a result of this process that a one percentage point change in the unemployment rate resulted in an increase of approximately 4.4 percent in the number of of AFDC eligible units. It was assumed that the impacts on the numbers of eligible subfamilies would be approximately the same as for the AFDC-eligible population as a whole.

   b. An adjustment factor for each year was then calculated by subtracting the unemployment rate for 1981 from each year's unemployment rate, and multiplying this difference by .044—i.e., the expected percentage change in eligibility for each percentage point difference in

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4. An economic adjustment was not made for the "other" subfamily category, since this estimate was based entirely on the reported number of eligibles, which varies with economic factors in any case.

unemployment. The resulting product was then subtracted from one, to arrive at the proportion of eligibles who would have been present if there had been no difference in unemployment over the two years [Column 4, Table 3.1].

c. This adjustment factor was multiplied by the demographically-adjusted total number of subfamilies headed by unmarried women, to arrive at a new estimated total for such subfamilies, including both adjustments [Column 5, Table 3.1].

6. Subtract the female-headed subfamilies already shown on the file [Column 2, Table 3.1] from the adjusted total number of subfamilies headed by unmarried women (derived in the last step). The results of this calculation are shown in Column 6 of Table 3.1.

7. Finally, addition of this number to the reported totals shown in Column 1 of Table 3.1 gives the estimated total number of subfamilies, including the adjustment for the estimated increase in subfamilies headed by unmarried women. [Column 7, Table 3.1].

As a comparison of the first and last columns of Table 3.1 indicates, the subfamily adjustment did result in substantial increases in the estimated number of eligible subfamilies. As might have been expected, the number of additional subfamilies added to the estimated eligible population declines as we go further back in time, but the overall rate of growth in the eligible subfamily population appears plausible in comparison to that for the eligible population as a whole. Overall, the eligible population is estimated to have increased by about 175 percent over this period, compared to an increase of about 220 percent for subfamilies alone. Unmarried women represented the fastest growing component of both populations, but are believed to make up a larger share of those in the subfamily group.

Having derived estimates of the adjusted total number of subfamilies between 1967 and 1981, it is now possible to use these estimates to

calculate the total eligible population, and to produce revised participation rate estimates. The next section outlines this process and presents its results.

Estimating Revised Participation Rates in AFDC

Calculating revised participation rates once the number of eligible subfamilies has been re-estimated is a fairly straightforward procedure. The two major components involve first, adding additional subfamilies to the existing estimates of total eligibles to arrive at adjusted estimates, and second, dividing total reported participation by the estimated number of eligibles to arrive at a participation rate estimate for each year. The total participation estimate used has also been adjusted slightly, to correct for administrative and procedural changes occurring from year to year, as explained below.

An examination of the characteristics of the subfamilies seen in 1981 and in earlier years led us to believe, as discussed earlier, that almost all of those added as a result of the coding changes were in female-headed subfamilies rather than in those headed by married couples. As a result, these subfamilies would have been eligible for the basic component of the AFDC program, rather than for the Unemployed Parent segment. In producing corrected estimates, therefore, we added the additional subfamilies in the adjusted subfamily totals into the estimate of eligibles for the Basic AFDC program. Estimates of participation in AFDC-UP have thus remained unchanged by these adjustments. As a result, most of the remainder of this chapter focuses on estimated participation rates in the Basic AFDC program. (The final section of the chapter does briefly discuss trends in UP, and

brings the estimates of participation rates in UP and in the AFDC program as a whole up to 1984.)

The steps involved in producing revised participation rate estimates for the basic program are illustrated in some detail in Table 3.2. As discussed above, the first step was the production of revised estimates of the total number of eligibles for the basic program. These estimates, shown in Column 3 of Table 3.2, were produced by adding the additional subfamilies not already included in earlier TRIM and TRIM2 estimates (shown in Column 2) to those earlier estimates (Column 1). (The estimates of additional subfamilies shown in Column 2 were derived in step 6 above, and are taken from Column 6 of Table 3.1.)

After producing an estimate of the total eligible population, it was also necessary to produce an adjusted estimate of the number of participating units in each year. For the most part, the participation totals used were obtained from data provided by the Office of Family Assistance (OFA). For the years between 1971 and 1981, it was necessary to adjust the OFA totals to exclude foster cases who received AFDC. Since such cases are not simulated in TRIM, they are not included in the eligible population, and including them in the participation totals would bias the participation rate estimates upward. (Foster cases are not included in the OFA totals before 1971 or after 1981, and so do not need to be subtracted out of the estimates for those years.)[5]

At this point, preliminary participation rate estimates were calculated, and are shown in Column 7 of Table 3.2. As that table shows,

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5. For further discussion of foster cases and the rationale behind this adjustment, see R. Michel, op. cit., pp. 10-13 and Appendix A.

Table 3.2

Revised Participation Rates in the Basic AFDC Program
(Number in Thousands)

Year	Eligibles			Participants			
	(1) Eligible Families and Subfamilies as Estimated in TRIM (before Adjustments)	(2) Eligible Subfamilies Added as a Result of Adjustments	(3) Total Eligibles	(4) AFDC Participating Families[a]	(5) Foster Cases[b]	(6) Total Participants w/o Foster Cases	(7) Rate
1967	2,545	165	2,710	1,138	—	1,138	42%
1970	2,984	215	3,199	2,056	—	2,056	64%
1973	3,260	180	3,440	3,065	84	2,981	87%
1976	3,546	253	3,799	3,439	105	3,334	88%
1979	3,631	299	3,930	3,395	104	3,291	84%
1980	3,848	383	4,231	3,553	100	3,453	82%
1981	4,237	—	4,237	3,619	106	3,513	83%
1982	4,207	—	4,207	3,302	—	3,302	78%
1983	4,331	—	4,331	3,402	—	3,402	78%
1984	4,213	—	4,213	3,435	—	3,435	82%

a. Calculated from total AFDC participation as reported in the monthly Social Security Bulletin minus total participants in Unemployed Parent Program, as reported to us by Wilma Hoover of the Social Security Administration's Office of Family Assistance (OFA).

b. Foster cases were included in total AFDC participation figures in 1971-1981 only. Number of foster cases from Emmet Dye, OFA.

SOURCE: Eligibility data from Urban Institute TRIM2 simulations based on the March Current Population Survey and participation data from the Social Security Administration Office of Family Assistance based on program statistics reported by the states.

adding additional subfamilies into our estimates of the eligible population lowered the estimated participation rate for peak participation periods before 1981, as might have been expected. The estimated participation rate for 1976, for example, declined from about 94 percent before the adjustment to about 88 percent after. Overall, however, the general pattern seen in the pre-adjustment figures for the late 1960s and early 1970s—a sharp increase followed by a fairly long period of relatively high participation rates—also appears in the adjusted figures, although because of the adjustments the actual rise seen is not quite as steep, and the plateau eventually reached is not quite as high.

Even with the adjustments, however, a small decline in participation rates does seem to have occurred in 1979 and later. This decline is not as steep as the 16 percentage point drop seen over a period of about five years in the unadjusted data, but overall participation rates in the basic program still seem to have fallen by about 10 percentage points between 1976 and 1982. About half of this decline appears to affect the 1982 and 1983 estimates only, however, with estimated participation rates rebounding to their 1980 levels in 1984.

Before considering these fluctuations in participation rate estimates in detail, one further potential adjustment to the data should be discussed. The rates presented so far, including those for the unadjusted data, have included all participants (and all eligibles) in calculating participation rates. However, there are a certain number of persons who receive AFDC in any given time period who, upon later examination, are found to have been ineligible, and to have been granted benefits in error. Clearly, these ineligibles are not included in our denominator--the

eligible population—and under these circumstances a case can be made for excluding them from the numerator as well. Table 3.3 therefore presents adjusted participation rate estimates for the basic AFDC program, including an error adjustment as well as the subfamily adjustments.

The process involved in adjusting for errors is fairly straightforward. The Office of Family Assistance compiles annual weighted average error rates across states for the AFDC program. Although information on various different types of errors is collected, the error rate for ineligibles—that is to say, the proportion of the caseload found to be ineligible—is compiled separately from other error rate information, allowing an adjustment to be made simply by excluding this proportion of the total reported number of participants from the participation rate estimates. This error rate is shown in the second column of Table 3.3. As is indicated there, the methodology for compiling this error rate underwent some substantial changes in the late 1960s and early 1970s, making comparable error rate adjustments impractical for dates before 1973.[6]

As Table 3.3 indicates, excluding ineligible participants results in lower participation rate estimates in all years, with the impact of this adjustment declining slightly over time. From the mid 1970s onward, error rates for ineligibles fell slowly from about 6 percent of the total caseload to about 4 percent. With the exception of the much higher error rate seen in 1973, then, this adjustment primarily lowers the overall participation rate estimate in each year, without significantly affecting

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6. The fact that the error rate shown for 1973 is very much larger than for later years may also be at least partially the result of methodological changes in the way the rate was compiled. For further discussion of error rates and this error rate adjustment, see R. Michel, Op. Cit. p. 75.

Table 3.3

Revised Participation Rates in the Basic AFDC Program,
with Error Adjustment
(Numbers in Thousands)

Year	Participants	Error Rate for Ineligibles[a]	Eligibles	Participation Rate (adjusted for errors)
1967	1,138	NA[b]	2,710	—
1970	2,056	NA[b]	3,199	—
1973	2,981	10.6	3,440	77%
1976	3,334	5.7	3,799	83%
1979	3,291	6.0	3,930	79%
1980	3,453	5.2	4,221	77%
1981	3,513	4.9	4,237	79%
1982	3,302	4.7	4,207	75%
1983	3,402	4.5	4,331	75%
1984	3,435	4.1[c]	4,213	78%

a. Weighted averages. Error rates supplied by staff of the Social Security Administration's Office of Family Assistance.
b. The methodology used to calculate error rates before 1971 was too different from subsequent methods to produce comparable error rates, so adjusted participation rates cannot be produced for these years. For further discussion see Richard C. Michel, "Participation Rates in the AFDC Program, Part I: National Trends from 1967 to 1977," Urban Institute Working Paper 1387-02, December 1980, page 75.
c. Preliminary data, based on first 2 quarters only.

SOURCE: Eligibility data from Urban Institute TRIM2 simulations based on the March Current Population Survey and participation data from the Social Security Administration Office of Family Assistance based on program statistics reported by the states.

relative year to year fluctuations in rates. The slow decline in error rates does result in a slight narrowing of the gap between the highest and lowest participation rates seen, but the years in which they occur do not change. The very high error rate estimate for 1973 helps to bring the adjusted participation rate estimate for that year more closely into line with those seen in 1979-1981, however.[7]

On the basis of the figures presented in Tables 3.2 and 3.3, then, it would appear that although the subfamily coding change did account for some of the apparent fall in participation rates seen in the unadjusted estimates, some real decline in participation rates also took place over the 1976-1983 period. The final section of this chapter briefly discusses some possible causes for this observed decline.

Summary and Conclusions: Trends in AFDC Participation Rates, 1967-1984

The aim of this chapter has been to adjust estimated AFDC participation rates for the changes in subfamily coding techniques that took place in the 1981-1982 Current Population Surveys, and to bring our estimates of total participation up to 1984, the most recent year for which data are available. Tables 3.2 and 3.3 presented the results of this process for the basic AFDC program.

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7. The data presented in Table 3.3 could be interpreted as indicating that 1976 participation rates were anomalous, representing a temporary upward blip in the data. In this case, the use of data for every third year only may be somewhat misleading, however. Although full-scale re-estimates for 1975 and 1977 were not carried out, primarily because we did not have the time or resources to perform a complete estimate of the numbers of subfamilies in each of those years, it is fairly clear from rough estimates that participation rates for these years would be in the same neighborhood as those for 1976, even after adjusting for ineligibles.

As discussed in the last section, because of the nature of the subfamilies missed prior to the coding changes, estimates for the Unemployed Parent component of the AFDC program were probably not significantly affected by these changes. For this reason, new participation estimates were not prepared for this segment of the program for the years 1967-1981. It was necessary to bring our estimates of UP participation up to date, however, and to re-estimate total program participation rates taking into account both the basic and UP components. Table 3.4 shows the results of this process.

As is demonstrated in Table 3.4, the UP component of the AFDC program has historically been significantly more volatile in both eligibility and participation than has the basic component, and this pattern persisted in the 1981 through 1984 period. Eligibility for UP, in particular, is quite sensitive to economic conditions, rising rapidly as unemployment rises, and falling equally dramatically in periods of recovery. Participation also fluctuates with unemployment rates, but there appears to be some lag—both increases and declines in participation appear to occur about a year or so later than the comparable changes in the number of eligibles.

This lag may occur for several reasons. It may take longer for the two parent families participating in UP to "spend down" their savings and other assets enough to become eligible for AFDC, for example, since relative to single parent families they are likely to have more assets to start with. (Although technically such families should not be counted among the eligible until their assets have been reduced, asset reporting on the CPS is poor, and for this reason program asset tests cannot always be accurately modeled.) Two parent families, which normally have two sets of

Table 3.4

Total AFDC Program Participants, Eligibles, and Estimated Participation Rates, by Program Component[a]
(Numbers in Thousands)

YEAR	BASIC COMPONENT			UNEMPLOYED PARENT COMPONENT			TOTAL		
	Participants	Eligibles	Participation Rate	Participants	Eligibles	Participation Rate	Participants	Eligibles	Participation Rate
1967	1,138	2,710	42%	56	204	27%	1,194	2,914	41%
1970	2,056	3,199	64%	100	232	43%	2,156	3,431	63%
1973	2,981	3,440	87%	99	179	55%	3,080	3,619	85%
1976	3,334	3,799	88%	139	171	81%	3,473	3,970	87%
1979	3,291	3,930	84%	114	199	57%	3,405	4,129	82%
1980	3,453	4,221	82%	159	330	48%	3,612	4,551	79%
1981	3,513	4,237	83%	216	288	75%	3,729	4,525	82%
1982	3,302	4,207	78%	240	445	54%	3,542	4,652	76%
1983	3,402	4,331	78%	282	420	67%	3,684	4,751	78%
1984	3,435	4,213	82%	281	301[b]	93%[b]	3,716	4,514[b]	82%[b]

a. Adjusted for subfamily coding change and foster children, but not for error rates.
b. Changes in the CPS sampling frame for 1984 may have affected eligibility estimates for the UP program in this year. Further exploration of this issue will be undertaken as 1985 data become available.

SOURCE: Eligibility data from Urban Institute TRIM2 simulations based on the March Current Population Survey and participation data from the Social Security Administration Office of Family Assistance based on program statistics reported by the states.

in-laws, may also have more resources available to them outside the immediate family unit, and may prefer to exhaust these before turning to public assistance programs. And, since the UP program is much smaller and less well known than the basic program, and varies more from state to state, it may simply take longer for UP eligibles to become aware of their eligibility. It is also possible that UP eligibles, who are likely to have more substantial work experience than those eligible for the basic program, may be more deterred by the "stigma" that may be associated with welfare program participation. Finally, it should be noted that the sample of UP eligibles in the CPS is much smaller than that for the basic program, and some of the greater volatility of the reported estimates may be due to this relatively small sample size.

Because the UP program is so much smaller than the basic AFDC program, the wide variations in participation rates seen in UP have relatively little impact on estimated participation rates for the AFDC program as a whole, which for the most part mirror those seen in the basic component of the program. The relatively low UP participation rates seen in the years 1973, 1979-1980, and 1982 all served to bring down total estimated participation by two to three percentage points, but did not significantly alter the overall patterns of participation observed over the period. These patterns, which appear to include a general downward trend in participation rates starting in the late 1970s, still remain to be explained.

This paper does not attempt to present a definitive answer to the question of why participation rates in AFDC appear to have declined since the late 1970s, with the exception of a small upturn in 1984. Nonetheless,

several factors seem to us to be suggestive. Referring back to Table 2.1 (in Chapter 2), for example, it can be seen that among families only (not including subfamilies) the decline in participation rates has been much smaller, in the range of one to two percentage points, which is probably well within the range of estimating error. This may imply that, although the additional subfamilies picked up after the coding change are technically eligible for AFDC, only a relatively small proportion actually participate. Since almost all of these additional subfamilies consist of young single women living with their own parents or other close relatives, they may have access to substantial resources without turning to public assistance.

Other hypotheses that have been advanced to explain the apparent decline in participation rates over the recent past have to do primarily with either economic or legislative factors. In economic terms, the period from 1979 to 1983 was one of high and for the most part rising unemployment rates, which in general tends to increase program eligibility. Unemployment also increases participation, but as discussed above, there tends to be some time lag, resulting in temporary declines in total participation rates.

The recession of the early 1980s followed a period in which real benefit levels had declined substantially, as state payment standards failed to keep up with rapidly rising price levels. This decline helped to limit both eligibility and participation, particularly among those with some other source of income such as earnings. Again, the impact on eligibility was probably larger than on participation, since those at the margin are relatively unlikely to participate in any case, because their

benefits would typically be very small. In the period immediately before the recession, therefore, economic factors may well have worked to increase estimated participation rates.

Whatever the impacts of economic factors over this period, they probably interacted with the effects of legislative changes in the program, especially those enacted in 1981-1982. In theory, these changes should have limited both participation and eligibility, and indeed, given the depth of this recession, it seems likely that both would have risen more rapidly in the absence of program change. Both eligibility and participation in the basic AFDC program actually declined between 1981 and 1982, in spite of the fact that unemployment rates went from about 7.6 percent to about 9.7 percent on average over this period.[8] The decline in participation was in fact quite a bit larger than the decline in eligibility—a fact that is hard to account for in terms of the legislative changes themselves, which should have had their greatest impact on AFDC eligibles with earnings, already a small and declining group. The most likely hypothesis here is that the eligibility decline resulting from the legislative changes was to a large extent offset by eligibility increases resulting from the recession, but that because of the lagged response of participation to economic events discussed above, the number of participants in the program did not experience a recession-related increase as early as did the number of eligibles.

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8. Increases in unemployment were smaller for women in general and for minority women in particular than for the population as a whole, but even for these groups the trend was in the opposite direction from that seen in AFDC participation and eligibility.

A second factor that may have affected participation but not eligibility during this period was the volume of the legislative changes themselves, which may have complicated program administration and introduced some delays in case processing. A survey of 60 local Food Stamp Program offices undertaken for the Food and Nutrition Service as part of a study evaluating the impacts of the 1981-1982 legislative changes in that program indicated that such administrative factors may have contributed to declines in participation seen in the Food Stamp Program during this period.[9] Similar changes were made in AFDC and the two programs are often administered in the same offices and even by the same caseworkers, so such factors may also have had some effect in the AFDC program.

As the above discussion demonstrates, many different factors can potentially affect estimated participation rates. Ultimately, our interest in participation rate fluctuations over time arises out of a belief that such fluctuations may tell us something important about the program itself, and about the way that it is serving its actual and potential clients. In a period such as the recent past, however, when several different factors appear to be affecting participation rates simultaneously, it is difficult to determine which fluctuations are part of the normal cycle of events or are the result of some planned change in the program, and which ought to indicate some area of potential concern. In order to begin to consider this question in more detail, the next chapter examines recent changes in the characteristics of program eligibles and discusses how these changes may affect analyses of the AFDC Program.

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9. See Richard C. Michel, Patricia Ruggles, et al., "The Effects of Legislative Changes in 1981 and 1982 in the Food Stamp Program", Final Report to Congress prepared for the U.S. Department of Agriculture Food and Nutrition Service, The Urban Institute, May 1985.

IV. TRENDS IN THE CHARACTERISTICS OF AFDC ELIGIBLES, 1979 - 1984

In Chapter III, it was shown that changes in the technical coding of subfamilies on Census data files resulted in a dramatic but artificial downward shift in the measured participation rates of eligible families in the AFDC Program during the period from 1980 to 1983. Revised estimates of 1967 - 1980 participation rates in the basic portion of the program show that rates during that period would have been 6 to 12 percentage points lower had this coding change been in effect then. This implies that analyses based on estimates using data files prior to 1981 were missing between 150,000 and 400,000 eligible subfamilies.

The large number of families missing from pre-1981 CPS data could have a dramatic effect on the results of all analyses of AFDC participation using such data. The extent to which behavioral analyses in particular are affected depends largely on whether or not the missing eligible subfamilies are different in some significant ways from previously-identified eligible families. The approach in this chapter of the paper is to examine trends in the characteristics of AFDC eligibles, and particularly eligible subfamilies, for purposes of identifying any significant discontinuities in those characteristics over the last five years.

The correct answer to this question is not obvious. Vital statistics data on births to unmarried women imply that, beginning in the mid-1970s, the number of potential subfamilies in the population began to grow dramatically. This growth was coincident both with a general demographic trend toward more poor single parent families (due in part to births to unmarried women and in part to rising divorce rates) and with economic downturns which created incentives for families to join into larger

households. By the time the CPS files were fully corrected to account for subfamilies, they numbered more than two million, an increase of more than 80% from the most recent prior CPS files.

This dramatic growth over the decade of the 1970s should have led to some fairly significant changes in the trend of welfare participation over this period. But while the corrected AFDC participation rates for the 1967 to 1981 period are lower in an absolute sense than previous estimates, their trends over time are consistent with the previous and well-known findings in Boland (1973), Michel (1980) and Moffitt (1986). These reports show that there was a significant upward movement in participation rates between the late 1960s and early 1970s, a downward trend throughout the 1970s and a stabilization through the early 1980s (see Table 3.4). These trends all either started or ended long before the coding change on the CPS files. This fact reinforces the ad hoc notion expressed by some analysts that analyses of AFDC participation over time would not be dramatically affected by the coding change.

There is no doubt that the adjusted participation figures imply little change in the aggregate behavior of AFDC eligibles over the last half-decade. But this may be misleading if the relative stability in participation rates between 1980 and 1984 was due to the net effects of offsetting changes between the subfamily coding adjustment and behavioral changes among eligibles. The underlying demographic trends noted above coupled with the policy changes that occurred in 1981 and 1982, for example, were expected to lead to some change in the aggregate rates because the nature of the eligible population was altered. The 1981 AFDC changes substantially lowered the break-even level in AFDC, thus decreasing

the number of higher-income/lower-benefit families eligible for the program(i.e. - those who are least likely to participate). The recession of 1982 increased the number of income-eligible families, by reducing both employment income generally and the opportunities for low-skill persons in particular. The policy changes should have acted to increase participation rates. The economic changes could have moved rates either upward or downward depending on whether the income needs of the newly-unemployed eligibles outweighed initial barriers to participation such as stigma and resistance to application procedures by potential applicants.

Given this, it is conceivable that a major structural shift occurred in the period between 1980 and 1984 which was masked by the subfamily coding changes and would not be picked up in analyses which rely on time series eligibility data from Current Population Survey files. One recent analysis using CPS data completed by Robert Moffitt argues that there was just such a major structural shift in AFDC between 1967 and 1973. While Moffitt did not carry his formal statistical analysis beyond 1979, his participation estimates through 1982 suggest that there may have been a second structural shift after 1979. In order to determine whether in fact some fundamental changes in the AFDC population occurred or, alternatively, whether any observed changes were erroneously introduced by the subfamily coding change, it is useful to look at trends in the characteristics of AFDC eligibles and participants and particularly at the characteristics of the growing number of eligible subfamilies.

The findings of this investigation potentially have important policy implications. The analysis shows significant changes in the nature of a subset of the families eligible for AFDC and traces much of it to the

growing number of eligible subfamilies. This could be cause for recommending legislative or administrative modifications to the AFDC Program. The results also indicate that at least some eligible subfamilies are imbedded in households which are by and large not the targets of low-income transfer programs such as AFDC. In order to better target future benefits, it might be desirable to develop further eligibility screens which make such subfamilies ineligible for benefits. Conversely, the results also imply that some of the subfamilies are clearly the intended targets of benefits but may not be participating at the levels expected. In order to bring assistance to such families, it might be desirable to develop procedures which encourage their participation so as to strengthen the financial security of the family households in which they reside.

In the next section of this chapter, trends in the characteristics of all eligible families as simulated by the TRIM2 model are presented and analyzed. In the following section, the characteristics of the eligible subfamilies are presented and compared with those of all eligible families.

Chapter V then analyzes the participating population as represented in the 1983 AFDC quality control survey and compares a selected number of participant characteristics to the characteristics of the eligibles. Chapter V also reviews the implications of these findings for policy makers and analysts and suggests possible directions for future research in this area.

Trends in the Characteristics of Eligible Families, 1979-1984

The size of the population simulated to be eligible for AFDC benefits grew modestly during the period between 1979 and 1984. After adjusting for

the exclusion of the missing subfamilies, the number of families eligible for the basic (non-UP) program was 3.9 million for 1979 and 4.2 million for 1980. For 1983 and 1984, the estimates were 4.3 million and 4.2 million, respectively. Thus the net growth of eligible families was 300,000 in the period from 1979 to 1984, a growth averaging 1.5 percent per year. This contrasts with the high growth period from 1967 to 1973 when the number of eligible families was growing at a rate of more than 4.5 percent per year.

During this period, the number of families eligible for the UP portion of the program fluctuated dramatically, growing and shrinking in apparent response to economic conditions. The overall program growth was dominated by the non-UP portion of the program which accounted for between 90 and 95 percent of eligible families in this period. Total participation thus grew by an average of less than 2 percent per year during this period and the number of eligible UP families seemed headed downward by 1984.

Despite this modest growth, which included the increase in the number of subfamilies shown in Table 3.1, the general characteristics of the eligible population appeared to remain remarkably stable over this period. In Table 4.1, a selected group of characteristics of the eligible population are shown over the period from 1979 through 1984.

The figures in Table 4.1 confirm that aggregate eligibility data over the period do not show dramatic shifts in the general characteristics of AFDC eligible families. This implies that the subfamily coding changes had minimal impact at the level of detail most widely available to policy makers and analysts. For example, in spite of wide fluctuations in the size of the UP-eligible population, the distribution of eligibles by race and sex show very little change during this period. Additionally, mean

Table 4.1

Characteristics of Families Eligible for AFDC 1979-1984

	1979	1980	1981	1982	1983	1984
Total families[a] (000)	4,129	4,551	4,525	4,652	4,751	4,514
Non-UP	3,930	4,221	4,237	4,207	4,331	4,213
UP	199	330	288	445	420	301
Percent Race and Sex(%):[b]						
White Female	44	44	45	42	41	44
Black Female	35	32	37	36	37	36
Other Female	2	2	2	2	2	2
White Male	14	17	13	16	17	15
Black Male	4	4	3	4	3	2
Other Male	1	1	1	1	1	1
	100	100	100	100	100	100
Mean Age of Head(yrs):						
White Female	32	32	31	31	31	31
Black Female	35	34	32	30	30	31
Other Female	33	34	35	33	32	34
White Male	42	41	42	39	39	40
Black Male	49	47	49	43	44	43
Other Male	49	41	39	44	38	39
Mean Monthly Income of AFDC Unit($):[c]						
White Female	524	506	515	478	501	527
Black Female	554	527	510	468	476	502
Other Female	579	630	632	637	593	631
White Male	1,215	1,175	1,151	1,253	1,200	1,323
Black Male	1,129	1,249	1,200	1,018	1,202	1,122
Other Male	1,261	1,033	1,142	1,304	1,175	1,198

a. Average monthly figures after correcting for subfamily coding changes.
b. Families ever-on over the course of the year not corrected for subfamily coding changes. Percent totals may not add due to rounding. In general, the "Other Male" category constitutes only about .5 percent of the eligible population.
c. Includes all income, including simulated AFDC benefits.

SOURCE: Urban Institute TRIM2 simulations based on the March Current Population Survey.

incomes do not exhibit any changes which are not consistent with changes in policy and in the economy, generally falling in 1981 and 1982 and rising in 1983 and 1984.

There is one small change which in fact reflects the impact of the increase in the number of subfamilies on the CPS files. The average age of black female family heads falls from 35 in 1979 to 31 in 1984. There is a similar decrease in the average age of black male family heads but this may be less significant because of the relatively small sample size for this group on the files (less than 20 observations).

While the characteristics on Table 4.1 do not display any dramatic shifts, they do contain some figures which, while not central to the theme of this paper, offer some interesting insights into the population eligible for AFDC:

- Families headed by females comprise more than 80 percent of the eligible population.
- Families headed by black males comprise a very small and apparently declining subset of AFDC eligibles while both the relative and absolute numbers of families headed by white males increased over the 1979-1984 period. Some of this is recession-related (see below).
- The average age of male heads is approximately ten years higher than the average age of female heads. Male heads tend to be in their forties, female heads in their early thirties.
- As the UP-eligible caseload rises, the average age of male heads falls. This implies that longer-term UP eligibles tend to be families headed by older men who either may have long-term work experience problems or may have difficulties finding jobs once they lose them. The recession brings in younger unemployed males whose prospects for obtaining work are somewhat better. In any event, the UP caseload clearly rises dramatically in response to economic downturns and this appears to alter the demographic characteristics of male eligibles.

The figures in Table 4.1 indicate a remarkable stability in the general characteristics of the AFDC eligible population in the early 1980s. However, these figures are averages (means) and mask significant changes in the underlying distributions which show up in a examination of more detailed cross-tabulations. The figures in Table 4.1 suggest, however, that these more detailed distributional analyses should be focused primarily on white and black female heads, ignoring both male heads of all races and non-white/non-black female heads.

There are several reasons for doing this. First, the volatility of the number of male-headed families as reflected in the UP data make it difficult to discern purely demographic shifts during this period. Second, the primary goal of this paper is to determine the effects of the subfamily coding changes on analyses of the AFDC population and, as is discussed in Chapter III of this paper, such coding changes affected female-headed subfamilies almost exclusively (see also Table 4.4 later in this chapter). Finally, the sample sizes for the category of female heads who are neither black nor white ("Other") are so small (always under 100 and sometimes under 80) as to make weighted frequency distributions unreliable. With this in mind, Tables 4.2 and 4.3 present more detailed data on the characteristics of white and black female heads of AFDC families in the period from 1979 to 1984.

The distribution of female heads by age group in Table 4.2 confirms what the more general means in Table 4.1 implied. In 1981, simultaneous with the start of the subfamily coding changes, there was a downward shift in the distribution of the ages of female heads whose families were simulated to be eligible for AFDC. This growth is most dramatic among

Table 4.2

Demographic Characteristics of AFDC Eligible Families Headed by Females, 1979-1984[a]

	1979	1980	1981	1982	1983	1984
A. Percent in Age Groups						
1. White Females						
15-19	6	4	8	8	7	7
20-24	20	21	22	23	21	24
25-29	21	22	22	23	25	23
30-34	20	20	17	16	18	17
35-39	12	13	14	13	12	11
40+	21	21	18	18	18	19
2. Black Females						
15-19	4	2	10	11	10	10
20-24	19	18	23	25	27	23
25-29	20	24	20	22	24	23
30-34	17	15	15	16	13	16
35-39	12	14	11	11	11	11
40+	28	26	21	16	15	17
B. Percent with Child Under Six						
1. White Females	54	54	59	59	57	61
2. Black Females	59	59	60	62	65	62
C. Education of Mother (Percent)						
1. White Females						
Less than high school	48	47	46	48	46	47
High school only	37	38	39	38	40	39
At least some college	15	15	15	14	14	14
2. Black Females						
Less than high school	50	49	45	42	41	43
High school only	38	37	40	44	43	41
At least some college	13	14	15	14	16	16
D. Percent with Numbers of Children						
1. White Females						
One child	39	44	43	44	45	b
Two children	32	34	34	33	34	b
Three children	19	13	14	14	14	b
Four or more	10	9	9	9	7	b
2. Black Females						
One child	28	29	35	35	37	b
Two children	31	31	32	36	35	b
Three children	18	19	19	16	15	b
Four or more	23	21	14	13	13	b
E. Marital Status (Percent)						
1. White Females						
Widowed	6	6	4	3	4	4
Divorced or Separated	77	77	74	69	69	66
Never Married	17	17	22	28	27	30
2. Black Females						
Widowed	11	9	6	5	4	5
Divorced or Separated	51	53	39	37	37	35
Never Married	38	38	55	58	59	60

a. Percentages may not add to 100 due to rounding.
b. Not available due to an error using the 1984 simulation file

SOURCE: Urban Institute TRIM2 simulations based on the March Current Population Survey.

Table 4.3

Income Characteristics of AFDC Eligible Families Headed by Females, 1979-1984[a]

	1979	1980	1981	1982	1983	1984
A. Family Income as a Percent of Household Income						
1. White Females						
LE 20%	8	10	15	19	15	17
21-40%	8	10	11	9	9	9
41-60%	5	4	6	7	7	6
61-80%	3	2	3	4	3	4
81-100%	76	75	66	61	66	64
2. Black Females						
LE 20%	3	4	13	16	15	15
21-40%	5	5	12	14	12	11
41-60%	3	4	6	9	9	8
61-80%	2	2	3	6	4	5
81-100%	86	84	67	55	59	62
B. Annual Incomes of Households Containing AFDC Families						
1. White Females						
LE 10k	72	71	63	62	66	b
11-20k	20	18	21	21	20	b
21-30k	5	7	9	8	8	b
+30k	3	4	7	9	6	b
2. Black Females						
LE 10k	80	78	65	62	63	b
11-20k	16	17	25	27	26	b
21-30k	3	3	6	8	5	b
+30k	1	2	4	3	6	b
C. Percent of Families with Earnings						
1. White Females	9	20	22	15	14	15
2. Black Females	5	15	16	6	8	10

a. Percentages may not add to 100 due to rounding.
b. Not available due to an error using the 1984 simulation file.

SOURCE: Urban Institute TRIM2 simulations based on the March Current Population Survey.

black female heads. In 1980, only 20 percent of black female heads were under age 25 and only 2 percent were in their teens. By 1982, when the coding changes were fully implemented, 36 percent of all eligible black female heads were under age 25 and eleven percent were teenagers. These percentages remained roughly stable during 1983 and 1984. The age distribution of white female heads exhibited similar, if less remarkable, changes during the same period. In 1980, 25 percent of all eligible families headed by a white female were under age 25 and 4 percent were teenagers; by 1982, 31 percent were under age 25 and 8 percent were teenagers. This downward age shift was evident throughout the age distribution with the percent of older women, particular those over age 40, falling accordingly.

The post-1980 distributions also show a visible shift in the reported marital status of black female heads. In 1980, 38 percent of black female heads identified themselves as being never married. By 1982, this figure had risen to 58 percent and continued to move slightly upward in 1983 and 1984. There was a corresponding decrease in the percent of black female heads reporting their status as divorced or separated and as widowed. Again similar, though not as sharp, changes occurred in the reported marital status of white female heads.

There appears to be a high correlation between these shifts in the marital status distribution and the implementation of the subfamily coding changes. The results are consistent with the hypothesis that most of the newly identified subfamilies were unmarried, primarily black, women who were not identified until the Census Bureau refined its coding procedures (see the discussion of this in Chapter II of this paper).

A third area in which there were significant shifts in the characteristics of the population eligible for AFDC is the number of children in families. In general, after 1980 the average family size was smaller. In 1980, 29 percent of black female heads had only one child while 21 percent had four or more children. By 1982, 35 percent of eligible black female heads had only one child while 13 percent had four or more children. Additionally, the percentage of black heads having a child under six rose modestly from 59 percent in 1980 to 62 percent in 1982. Neither the age nor the number of children in eligible families headed by a white female displayed significant changes during this period.

In one other area the characteristics of the heads of families eligible for AFDC showed a modest change, though one which may in part be due to a longer term trend which is independent of the subfamily coding change. In 1980, 37 percent of black female heads had received a high school diploma and another 14 percent had gone beyond high school. By 1982, 44 percent of black female heads had received a high school diploma and a similar 14 percent had gone beyond high school. During this period, there were no significant changes in the education characteristics of white female heads. Some of this might be attributable to the coding change. However, AFDC recipient characteristics studies since the early 1970s have also shown an upward trend in the education level of female heads, so that at least some of the change observed on the Census files used here may be part of that longer term movement.

The changes in the demographic distribution of female heads of AFDC eligible families are of some interest but the primary policy implications of any changes are more likely to be contained in observed income shifts.

The principal concerns of policy makers are the financial resources available to the AFDC family or subfamily and how those resources affect their current or future likelihood of participating in the program. Since the natural breakeven levels for families in the AFDC program are relatively low the income in the AFDC unit itself is not of much interest; it will always be low.[1] This fact is particularly true for female-headed families and is shown in Table 4.1. A more important issue is the income of the household in which the subfamilies reside. If this household has relatively low income, then the benefit for which the AFDC unit is eligible could be regarded as appropriately targetted. If, on the other hand, the household has relatively high income, then it might be desirable to encourage the non-AFDC household members to contribute more substantially to the care of the AFDC family.

There are several ways to look at the income resources available to households in which AFDC units reside and two of them are shown in Table 4.3. The first distribution shows the percent of household income that is accounted for by the AFDC unit within the household. Clearly, the closer this percent is to 100, the greater the share of household income provided by the AFDC unit. For AFDC families with zero non-AFDC members, this number will be exactly 100 percent. The figures in Table 4.3 show that

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1. In the period from 1981-1983 gross income must have been below 150 percent of a state's standard of need and beginning in 1984 the threshhold became 185 percent of the standard of need. As a point of reference, state standards of need are generally below the poverty threshold used by the Bureau of the Census. In January 1984, for example, the standard of need for a family of four persons in the state with the median standard, Florida, was $468 per month or $5,616 per year. This represented 53 percent of the weighted poverty threshold for a family of four in that year. (See U.S. Congress Committee on Ways and Means, February 1984.)

there was a dramatic decrease in the proportion of household income being provided by AFDC units beginning in 1981 when the subfamily coding changes were implemented.

Among families headed by black females, the proportion providing 80 percent or more of the household's income dropped from 84 percent in 1980 to 55 percent in 1982 and the proportion providing less than 20 percent of the household's income increased from 4 to 16 percent in that same period. Similarly, among families headed by white females the proportion providing 80 percent or more of the household's income dropped from 75 percent in 1980 to 61 percent in 1982 and the proportion providing less than 20 percent increased from 10 percent to 19 percent in that same period. Some of these shifts were clearly related to the recession since for both race groups the proportion providing more than 80 percent rose and the proportion providing less than 20 percent fell during the 1983-84 economic recovery.

A second set of figures on Table 4.3 shows the current dollar annual incomes of all households containing AFDC eligible families. This set of numbers confirms an upward trend in the income of those households coinciding with the implementation of the subfamily coding changes. In 1980, 5 percent of the households containing AFDC families headed by a black female had incomes above $20,000 per year; by 1982, this figure had risen to 11 percent. A similar increase from 11 percent to 17 percent occurred among households containing AFDC families headed by a white female. Similarly, the proportion of households having incomes of less than $10,000 per year decreased from 78 percent in 1980 to 62 percent in 1982 for households containing black female AFDC heads and from 71 percent to 62 percent for households containing white female AFDC heads.

A third set of numbers on Table 4.3 shows the percent of AFDC family units with some earnings over the period from 1979 to 1984. These numbers appear to be dominated by economic and policy changes, however, rather than the subfamily coding change. It is important to understand that the percentages shown in Table 4.3 reflect the number of eligible families who reported some earnings over the course of the year. If, for example, a female head was employed early in the year but lost her job, she could have become eligible for AFDC for a portion of the year even though her earnings for the remainder of the year were relatively high. Additionally, the earnings figures include members of the household other than the mother who might have worked for all or part of the year at low wages, such as a teenage child. Traditionally, we would expect these percentages to rise as the economy moved into a recession, stabilize during a recession and rise again coming out of the recession. This latter trend occurs because as the economy improves, female-headed families may be eligible for AFDC early in a given year but find work later in the year. A final consideration in interpreting the earnings figures relates to the 1981 OBRA changes which most affected families with earnings by altering disregards and break-even levels. All other things being equal, it would be expected that the percent of eligible families with earnings would fall between 1981 and 1982.

The earnings figures in Table 4.3 seem to confirm all of these trends. As the economy moved into the 1980 mini-recession, the percent of families with earnings at some time during the year rose. It was relatively stable between 1980 and 1981, then dropped significantly after the 1981 OBRA policy changes. These policy changes occurred in the midst of the severe

recession of 1982 and the two events no doubt counterbalanced one another. The earnings percentage for eligible white female heads exhibited a great deal of stability in the 1983-84 period, while the percentage for eligible black female heads showed a general trend upward. This may reflect the fact that the general unemployment rate among black females showed a sharper drop between 1983 and 1984 than the unemployment rate among white females. In any event, it appears clear that any trends in the earnings percentages were primarily caused by events other than the subfamily coding change.

The distributions contained in Tables 4.2 and 4.3 belie the relative stability in the AFDC eligible population implied by the mean data contained in Table 4.1. These distributional data show that after the subfamily coding changes in 1981, the female heads of families eligible for AFDC benefits were likely to be significantly younger, slightly more educated and have fewer children than previous populations of simulated eligibles. Furthermore, they were far less likely to have ever been married and more likely to reside in households with relatively high incomes.

In order to confirm that these trends in the eligible population were largely the result of the changes among the population of subfamilies, it is necessary to examine data which pertain only to the subfamily eligibles. In the next section, distributional data on these subfamilies are presented and analyzed.

Trends in the Characteristics of Eligible Subfamilies, 1979-1983

The figures in Tables 4.4 and 4.5 show a selected number of characteristics of AFDC eligible subfamilies between 1979 and 1983.[2] The first point to note is the sizable increase in the number of female-headed eligible subfamilies between 1980 and 1981. More than 400,000 subfamilies were added to the eligibility estimates, an increase of 93 percent in a single year. Between 1981 and 1983, another 154,000 eligible subfamilies were added but as noted in Chapter III, this appears to be primarily have been caused by the severity of the 1981-82 recession and not by the subfamily coding change.

Of the 449,000 female-headed subfamilies added to eligibility estimates between 1980 and 1981, 267,000 or 59 percent were black. This represented a remarkable increase of almost 200 percent in the number of eligible black female-headed subfamilies being identified on the CPS file. In contrast, while 183,000 white female-headed subfamilies were added to the eligibility estimates, this represented only a 57 percent increase in

2. Subfamily figures are available only for the period from 1979 and 1983 and not for 1984. Several efforts were made to draw a usable subfamily extract from the 1984 file with no success and resource and time constraints prevented further attempts. Since, however, recipient data (to which the eligible data will be compared in the next section of this paper) were only available through 1983 when the paper was being written, it was believed this would not affect the analysis significantly. The 1984 distributional data are not expected to be substantially different than those for 1983.

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Table 4.4

Demographic Characteristics of AFDC Eligible Subfamilies Headed by Females, 1979-1983[a,b]

	1979	1980	1981	1982	1983
A. Number of Eligible Subfamilies (000)					
1. Female					
White	300	322	505	530	512
Black	125	142	409	483	544
Other	17	17	16	19	28
Total	442	481	930	1,032	1,084
2. Male					
Total	42	71	60	100	104
B. Percent in Age Groups					
1. White Females					
15-19	16	9	22	20	21
20-24	33	36	36	36	32
25-29	23	30	21	23	26
30-34	14	15	9	10	11
35-39	9	7	8	7	6
40+	5	4	4	5	6
2. Black Females					
15-19	10	6	28	28	26
20-24	29	20	42	37	42
25-29	29	35	14	17	18
30-34	12	21	10	11	8
35-39	8	14	4	4	4
40+	12	4	2	2	2
C. Percent with Child Under Six					
1. White Females	69	68	76	74	73
2. Black Females	58	67	83	78	84
D. Education of Mother (Percent)					
1. White Females					
Less than high school	51	40	45	43	45
High School only	36	43	41	42	44
At least some college	13	17	14	15	11
2. Black Females					
Less than high school	35	32	38	41	38
High School only	51	50	48	44	45
At least some college	14	18	14	15	17
E. Percent with Numbers of Children					
1. White Females					
One Child	58	62	59	60	56
Two Children	30	28	34	29	34
Three Children	9	8	6	9	8
Four or More	3	2	1	2	2
2. Black Females					
One Child	44	40	47	40	46
Two Children	38	31	38	43	38
Three Children	13	14	11	11	13
Four or More	5	15	4	6	3
F. Marital Status					
1. White Females					
Widowed	2	2	1	2	2
Divorced or Separated	79	85	65	56	53
Never Married	19	13	34	43	45
2. Black Females					
Widowed	3	3	1	1	LT.5
Divorced or Separated	50	73	19	20	17
Never Married	47	24	80	79	83

a. Percentages may not add to 100 due to rounding.
b. Data for subfamilies not available for 1984.

SOURCE: Urban Institute TRIM2 simulations based on the March Current Population Survey

Table 4.5

Income Characteristics of AFDC Eligible Subfamilies Headed by Females 1979-1983[a,b]

	1979	1980	1981	1982	1983
A. Family Income as a Percent of Household Income					
1. White Females					
LE 20%	40	45	51	59	50
21-40%	36	37	32	27	25
41-60%	16	13	13	10	17
61-80%	7	3	4	3	5
81-100%	2	2	1	1	3
2. Black Females					
LE 20%	31	33	46	48	44
21-40%	27	31	34	36	32
41-60%	22	28	14	13	20
61-80%	13	6	5	3	3
81-100%	7	1	2	1	1
B. Annual Incomes of Households Containing AFDC Subfamilies					
1. White Females					
LE 10k	26	19	17	14	15
11-20k	46	40	34	32	38
21-30k	19	23	24	25	22
+30k	9	18	25	28	25
2. Black Females					
LE 10k	40	30	24	20	25
11-20k	41	44	49	51	47
21-30k	14	20	17	19	11
+30k	5	6	10	11	17
C. Percent of Subfamilies with Earnings					
1. White Females	25	18	31	24	17
2. Black Females	8	19	17	9	10

a. Percentages may not add to 100 due to rounding.
b. Data for subfamilies not available for 1984.

SOURCE: Urban Institute TRIM2 simulations based on the March Current Population Survey.

their numbers. To be sure, this is a substantial increase but one which is less likely to alter the average characteristics of the subgroup.[3]

The subfamily characteristics in Tables 4.4 and 4.5 show similar trends to the family characteristics in Tables 4.2 and 4.3 but there are clearly some major differences between the population of AFDC-eligible subfamilies and the population of all eligible families. They are younger and correspondingly a higher proportion of them have young children. In general, they have fewer numbers of children. They are also far less likely to have ever been married.

Several trends should be noted from the tables:

- In 1983, 53 percent of white female subfamily heads were under 25 and 21 percent were teenagers. These figures contrast with those for all white female eligibles in 1983, only 28 percent of whom were under 25 and only 7 percent of whom were teenagers. Among black female subfamily heads, 68 percent were under 25 in 1983 and 26 percent were teenagers. Comparable figures for all eligible black female heads were 33 percent and ten percent, respectively.

- In 1983, 73 percent of white female and 84 percent of black female eligible subfamily heads had a child under six years old. Among the larger population of eligibles, only 57 percent of white females and 65 percent of black females had a child under six.

- In 1983, 90 percent of white female and 84 percent of black female eligible subfamily heads had two or fewer children.

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3. The figures in Table 4.4 also reinforce the decision not to include male subfamilies in our analyses. The coding change appears to have no significant impact on the number of male-headed subfamilies eligible for AFDC. The number of eligible male-headed subfamilies is fairly constant between 1980 and 1981 and only begins a substantial rise during the 1982 recession year, a result which would be expected given the lagged responsiveness of the UP portion of AFDC to unemployment rate changes.

The comparable figures for the larger population of eligibles are 79 percent for white females and 72 percent for black females.

- In 1983, 45 percent of white female and 79 percent of black female eligible subfamily heads reported that they had never been married. Among the larger population of eligibles, only 27 percent of white females and 59 percent of black females reported that that they had never been married.

- In 1983, 45 percent of white female and 38 percent of black female eligible subfamily heads reported that they had not completed their high school education. This was actually somewhat below the comparable percentages for the larger population of eligibles which stood at 47 percent for white female heads and 43 percent for black female heads. This implies that eligible subfamily heads are somewhat better educated than other eligible heads.

The data in Tables 4.4 and 4.5 confirm prior expectations about the differences in the income characteristics of the households in which subfamilies reside. Because subfamilies are by definition subordinate to some larger unit with a different head than the AFDC family, they are more likely both to contribute less to overall household income and to live in households whose overall income is higher.

In 1983, for example, only three percent of white female subfamily heads contributed at least 80 percent of the household's income, while 50 percent contributed 20 percent or less. Among the larger group of eligibles, nearly two-thirds of white female heads contributed at least 80 percent of the household's income, while only 17 percent contributed 20 percent or less. Among black female subfamily heads in 1983, only one percent contributed at least 80 percent of the household's income while 44 percent contributed 20 percent or less. Among the larger group of eligible black female heads, 59 percent contributed 80 percent or more to the household's income while only 15 percent contributed 20 percent or less.

This reinforces conventional beliefs that subfamilies tend to reside in households which do not rely primarily on the subfamily AFDC benefits for financial support. The economic structures of households containing AFDC subfamilies are thus likely to be very different from those of most AFDC eligible families.

The incomes of the households in which the subfamilies reside are also much different than for the general population of eligibles. In 1983, 15 percent of white female subfamily heads resided in households where total annual income was $10,000 or less, while 25 percent resided in households where the annual income exceeded $30,000. In the larger eligible population, 66 percent of white female heads resided in households where annual income in 1983 was $10,000 or less and only six percent resided in households where annual income was more than $30,000. Among black female subfamily heads in 1983, 25 percent resided in households where annual income was $10,000 or less while 17 percent resided in households where annual income exceeded $30,000. In the larger eligible population, the comparable figures were 63 percent and six percent, respectively. In other words, while very nearly two-thirds of <u>all</u> eligible female AFDC family heads live in households which have annual incomes of $10,000 or lower, more than one out five eligible subfamily heads reside in households whose annual income is over $30,000.

One major question which arises in this analysis of the impact of the coding change is whether the addition of the substantial number of identified subfamily heads between 1980 and 1981 significantly altered the characteristics of all or part of the AFDC eligible population. The answer seems to be yes.

In looking back at the trends in the characteristics of all eligibles in Tables 4.2 and 4.3, it is clear that after 1980 the simulated eligible population became younger, had smaller families, were less likely to have ever been married and lived in households with higher incomes. These trends are all mirrored in the subfamily characteristics changes in this period. Between 1980 and 1981:

- The percentage of teenagers heading white female AFDC eligible subfamilies rose from nine to 22. The comparable increase among black subfamily heads was even more dramatic, increasing from six percent to 28 percent. Furthermore, the percentage of 20-24 year olds heading black female AFDC eligible subfamilies rose from 20 percent in 1980 to 42 percent in 1981. By 1981, 70 percent of all black subfamily heads were under the age of 25.

- The percentage of white female eligible subfamilies with a child under six years old increased from 68 percent in 1980 to 76 percent in 1981. Among black female eligible subfamilies, the figure increase from 67 percent to 83 percent.

- While the distribution of families by number of children stayed relatively stable among white female subfamilies, the proportion of small black subfamilies increased. In 1980, 71 percent of black female subfamily heads had one or two children. In 1981, the comparable figure was 85 percent.

- In 1980, only 13 percent of white female subfamily heads and 24 percent of black female subfamily heads reported that they had never been married. By 1981, this figure for white females had risen to 34 percent and by 1983 had reached 45 percent. The change among black females was more startling. In 1981, 80 percent of black female subfamily heads reported that they had never been married and by 1983, the figure had reached 83 percent.

- The proportion of white female subfamily heads contributing 20 percent or less to household income increased from 45 percent in 1980 to 51 percent in 1981 and the proportion living in households with annual incomes of more than $30,000 increased from 18 percent to 25 percent. The proportion of black female subfamily heads contributing 20 percent or less to household income increased from 33 percent in 1980 to 46 percent in 1981 and the proportion living in households with annual incomes of more than $30,000 increased from six to ten percent.

- The proportion of subfamilies with some earnings during the course of the year fluctuated widely during the period between

1979 and 1983, exhibiting no trend which could be directly associated with the subfamily coding change. Except for the 1979 figures, which may have been distorted by small sample sizes for subfamilies in that year, the pattern is comparable to those exhibited by the full population of eligibles and consistent with economic cycles as discussed in the previous section.

There are two general implications of these findings for research and policy for the AFDC program. The research implication is perhaps the more troublesome because it cannot be easily corrected. For many years, welfare researchers have analyzed the behavior of AFDC eligibles and recipients by using Current Population Survey files. Such studies have sometimes estimated participation rates (Boland, 1973; Michel, 1980). Others have analyzed behavioral differences among eligibles (Willis, 1980; Moffitt, 1986).

It is clear now that some of the conclusions drawn from those studies may contain fundamental errors because of the inability to identify the appropriate AFDC-eligible subfamilies on the CPS files. The magnitude of the most obvious of these errors is evident in Table 3.4 which shows that both peak and current participation rates in the AFDC program were and are much lower than previously believed.

There are also more subtle but equally misleading errors which might be found in analyses which attempt to identify the determinants of behavior, such as participation or labor supply decisions. Since this project was not intended to replicate existing and more rigorous behavioral studies, the potential magnitude of these differences is difficult to

determine. But it could be substantial.[4] Tables 4.2 through 4.5 clearly show the subfamily coding change caused some major shifts in the characteristics of both eligible subfamilies and the entire eligible population. More eligible subfamilies were black, young and never married. Such families might be expected to behave much differently than older family heads. For one thing, they are more likely never to have had a job thus making it less likely that they would be able to obtain work should they desire to do so. For another thing, they may have a different attitude toward welfare receipt generally. In any event, it is clear that if an analyst estimated longitudinal changes in the behavior of AFDC eligibles, he or she might erroneously conclude that there was a shift in the behavior of welfare eligibles in the post-1980 period, right after the implementation of the Omnibus Budget Reconciliation Act of 1981. Such erroneous conclusions could lead to incorrect or misguided policy decisions. While there is little that can be done to correct the longitudinal inconsistences in the CPS files, it is important to make welfare analysts who use the CPS aware of the possible magnitude of the subcoding change effects.

The research implications in fact carry well beyond analyses of AFDC program recipients. For example, much media attention in recent months has

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4. One additional caution here is that none of the existing analyses based on Current Population Survey files, including this one, accurately capture the effects of assets screens on eligibility. This is because asset levels must be imputed to the files using the inexact proxy of reported income flows from assets, such as interest, dividends and rent. This is sometimes believed to bias all eligibility estimates upward since the current asset imputations allow some asset-ineligibles to appear eligible. However, since assets tend to be highly correlated with income, it is the opinion of the authors that these biases are likely to be small in the simulation of AFDC eligibility.

been directed toward the "underclass," a somewhat ill-defined group of families who are characterized as being socially and economically dysfunctional. Most specific definitions of this underclass include families whose heads are young and black. Analyses of the growth of this subgroup of the population which are based on CPS files are likely to show a dramatic increase in the number of such families headed by females beginning in 1981. As is clear from the findings of this paper, some significant portion of this increase would really be the result of the subfamily coding change and not a real-world phenomenon.

The policy implications of the findings of this paper are equally important. The eligibility data show that subfamilies which are eligible for AFDC differ in significant ways from the majority of AFDC eligibles. Though in most cases the incomes of the households in which AFDC subfamilies reside are not above the AFDC breakeven levels, there are a not insignificant number who are residing in households with what appear to be relatively high average incomes. It seems reasonably certain that it was not the intent of AFDC legislation to provide benefits to families residing in households whose incomes were high, say above $30,000 per year.[5] If this is the case, then appropriate policy decisions might be initiated to account for the presence of income from other household members who could be providing a greater measure of support to the AFDC unit.

The potential impact of the subfamily findings on AFDC program participation and cost levels is to a large extent dependent upon the

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5. In fact, in 1984 as part of P.L. 98-369 (The Deficit Reduction Act), a provision which deemed parents' income to teenage children was implemented, thus preventing such occurrences for a subgroup of subfamilies.

participation behavior of the existing eligible subfamilies. In the next chapter of this paper, participation rates of subgroups are examined for 1983 by comparing the eligible estimates from the TRIM2 model with data from the AFDC quality control data. Additionally, the implications of these findings for policy making and future research are explored.

V. AFDC PARTICIPATION RATES IN 1983 AND IMPLICATIONS FOR POLICY AND RESEARCH

Data presented in the last chapter show that the subfamily coding change implemented in 1981 on Census Current Population Survey files had a non-trivial effect on the estimated characteristics of the AFDC-eligible population. The question remains as to what implications this finding has for the actual operation of the AFDC program and for future research in this area.

While most of the newly discovered subfamilies reside in households whose incomes appear to be below the relevant AFDC breakeven levels, a substantial portion of them are in households whose annual income is relatively high. Policy options that might be considered therefore include changes in AFDC eligibility criteria which would limit the possibility that families receive benefits they may not require. However, it is not clear a priori how much of an impact any such changes would have on program caseloads and costs since not much is known about the participation behavior of such AFDC units. If they do not participate in the program in any significant numbers, a policy change, while it may be good for other reasons, would not substantially reduce caseloads or costs.

In this chapter, the participation rates of subgroups of AFDC eligibles are examined in as much detail as sample sizes allow. Additionally, possible directions for future research and for policy are briefly explored.

Participation Probabilities of Subgroups in AFDC, 1983

The TRIM2 AFDC simulations discussed in previous chapters provide much information on the characteristics of eligibles which cannot be obtained from program data and other sources. But they do not provide any independent information on the how the characteristics of eligibles compare with the characteristics of participants. Thus, the simulations show that the number of subfamilies potentially eligible for benefits is substantial but do not indicate whether families with similar characteristics are actually receiving benefits.

The most accurate sources for obtaining data on the characteristics of participants in the program are the AFDC Program Quality Control (QC) surveys.[1] At the time this analysis is being prepared, the latest QC data available is from the 1983 survey. Participation probabilities can be generated by dividing the number of estimated eligibles in a subgroup as simulated by TRIM2 on the CPS by the number of participants in the same subgroup as reported in the QC data.

As is the case with any two data sets drawn from different surveys, comparisons can present problems of consistency. The income data drawn from the QC survey, for example, is for the month prior to the survey and applies almost exclusively to the AFDC unit itself rather than the household in which it resides. The income data from the CPS files, on the other hand, is for the previous year and thus can include periods of ineligiblity for AFDC benefits. Additionally, because program rules are precise and eligibility agents are careful to pursue marital status and

1. The Quality Control Survey data have been used in recent years to replace data from the biannual AFDC characteristics surveys which were taken in the 1960s and 1970s.

other questions which relate to categorical eligibility for benefits, the QC data is likely to be superior to the CPS data in those areas. Census survey staff are thought to rely largely on the integrity of the respondent on questions of marital status since the CPS responses do not determine program eligibility but serve more heuristic purposes. Also, QC data for 1983 do not precisely identify subfamilies, making comparisons at that level impossible.

A final problem is with sample sizes on both files. Detailed analyses, for example, by narrow income classes cross-tabulated with marital status can lead to very small sample sizes (less than fifty observations), making generalizations quite difficult and in some cases leading to clearly incorrect participation probabilities.

As a result, the participation probabilities presented in this chapter are restricted to a selected number of criteria on all eligible families which provide some insight into the possible participation behavior of the subfamilies examined earlier. These should not be regarded as definitive participation rates and greater confidence should be placed in relative differences among the subgroups than in the absolute level of participation estimated. In other words, if subgroup A has a calculated participation probability of .7 and subgroup B has a calculated participation probability of .4, it is probably safe to assume that A-types participate at a higher rate than B-types. But it is less certain whether the proportion of A-types who participate is exactly 70 percent or rather some higher or lower number. With this in mind, Table 5.1 presents calculated participation probabilities for a selected number of subgroups within the AFDC eligible population.

Table 5.1

Participation Probabilities of AFDC Families
Headed by Females, 1983

	White Females	Black Females
1. All Families	.62	.81
2. Marital Status		
Never Married[a]	.87	.97
All Other	.51	.50
3. Age of Mother		
Under 20	.53	.63
20-24	.79	.79
25-29	.63	.79
30-34	.61	.97
35-39	.60	.69
40+	.41	.69
4. Monthly Income[b]		
Under 500	1.07	1.20
500-750	.12	.20
750-900	.09	.11
900-1,500	.05	.05
1,500-2,000	.04	.01
2,000+	LT .005	.01

a. "Never married" is the code from the CPS file. The rough equivalent on the QC file is "not married" which is clearly subject to more interpretation.
b. Monthly income from the CPS is derived from annual income variables which are allocated across the year.

SOURCE: Eligibility data (for the denominators) from Urban Institute TRIM2 simulations based on the March Current Population Survey. Participation data (for the numerators) from special tabulations on the 1983 AFDC Quality Control Survey analysis file provided by the Department of Health and Human Services Office of Income Security Policy in the Office of the Assistant Secretary for Planning and Evaluation.

The major results in Table 5.1 are not surprising. Families headed by black females participate at a significantly higher rate than families headed by white females. Families headed by a female who reports never having been married participate at almost twice the rate of families headed by all other females, regardless of race.

Among the age groups, there is no discernible pattern. A priori, it might be expected that, if participation is related to the fertility period of the mother and the age of her children, then the pattern of rates would increase through peak child-bearing years and begin to taper off as the children mature and become ineligible for benefits. In fact, families headed by teenage mothers of both races participate at lower rates than all other age groups. But while participation probabilities among black females follow the expected bell-shaped pattern, peaking in the 30-34 age range,[2] participation probabilities among white females peak in the 20-24 age range and fall consistently thereafter.

Participation probabilities among income ranges show the difficulties in comparing the monthly income classes on the QC files with the annual income classes on the CPS files. Calculated probabilities for the group of families with monthly incomes below $500 (the average income for all AFDC eligibles as shown in Table 4.1) exceed 100 percent. This is clearly

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2. The participation rate among 30-34 year old black women is estimated to be 97%. For sample size, as well as other, reasons this is probably an overstatement of the level of participation in this subgroup. However, the figure is so much higher than rates in surrounding age groups that, while it may not be exactly 97%, it is almost certainly higher than those other rates.

inaccurate and primarily reflects the income period differences alluded to earlier.[3]

The QC data from which the numerator is drawn show income only during the month during which AFDC benefits were received while the CPS figures reflect income for the full year during which AFDC benefits were received. For that large subset of families who were eligible and participated all year during 1983, this probably does not matter much: average monthly income for the year would be close or equal to income for any specific month. But for those families who participated only a portion of the year, this difference matters very much since the periods of non-participation in AFDC are likely to have been periods of higher-than-normal income for them.

Both sets of numbers accurately capture the income of the families in the period for which they collect data: the QC figures miss any income during periods of non-participation, however, and the CPS figures do not correctly reflect monthly fluctuations across the year.[4] While neither concept is incorrect, neither is perfect in reflecting the actual economic status of an AFDC eligible or participant family, even in the short run.

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3. In addition, it should be noted that the income definitions for eligibles and participants differ somewhat. In particular, AFDC income is included in total income for all participants but is not included for eligible non-participants since it is not received. Clearly, the income brackets for at least some of these eligibles would change if they became participants.

4. For many analyses, there is an additional problem in the "underreporting" of income on the CPS files. TRIM2 corrects for this underreporting in the Supplemental Security Income (SSI) program and suffers less from this than other analyses based on non-simulated transfer program benefits. The underreporting of wage income and social security benefits is not severe and other income sources which are underreported on the CPS, such as veterans benefits, are relatively unimportant factors for AFDC families.

And though analysts do not agree on which concept is the more appropriate, one thing is clear: generating participation probabilities using the two separate income concepts is like dividing the proverbial apple by the proverbial orange for a significant subset of AFDC eligible families.

Accordingly, it is wise to heavily discount the absolute participation probabilities by income classes shown in Table 5.1. They are useful, however, in one very general sense. It is quite obvious from both the raw participation numbers on the QC file and from the probabilities in Table 5.1 that higher income families do not participate at anything close to the rate of lower income families. The number of families having monthly incomes above $2,000 (an annual equivalent of $24,000) is quite small. And while participation probabilities rise somewhat as income declines, there is no significant level of participation for any set of families whose income is above $9,000 or $10,000 per year.

There are several observations to be made from this with respect to the subfamily issue. In Chapter IV, data from the CPS indicated that the newly-found subfamilies were more likely to be young, more likely to be black, and more likely to have never been married than the majority of the AFDC eligible population. The participation probabilities for race and marital status groups in Table 5.1 indicate that black females and never married females have a higher than average probability of participating in the program. Teenagers in general but white teenagers in particular have a lower probabilty of participating. And higher income families have a very low probability of participating.

Since most of the subfamilies who were added to the eligibility simulations as a result of the coding change were black and unmarried, it

is highly likely that these newly-discovered eligibles were in fact already participating in the AFDC program. The possibility of a rapid expansion of program participation among this group, akin to the growth which occurred in the whole program during the period between 1967 and 1973, is negligible.

There is some possibility for growth in participation among teenage eligibles, but this group is currently a relatively small part of the eligible population, making up only about five percent of all eligible families. Thus, the potential cost impact of a behavioral change among eligible teenage mothers is relatively small. Furthermore, at least some of these teenagers are imbedded in larger households with relatively high incomes which were excluded from eligibility by changes to the law implemented in 1984.[5] Also, if the remaining AFDC units in these higher income households behave in manner similar to relatively higher income pure AFDC households, the chances of an increase in participation among this group is quite small.

Implications for Policy

These observations when coupled with the distributional data on subfamilies presented in Chapter IV have several implications for AFDC policy generally. First, the lower absolute participation probabilities revealed by correcting for the subfamily coding error, although they imply

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5. In 1984, as part of P.L. 98-369 (The Deficit Reduction Act), the concept of income "deeming" was applied to the parents of teenage mothers (ages 15 - 17) living at home who might be eligible for AFDC benefits. Under the deeming provisions, after accounting for the needs of the parents and for work-related and child care expenses, the net income of the parents are included as part of the income of the AFDC subfamily in determining eligibility and benefits.

that the pool of eligible non-participants is larger than previously thought, probably do not imply that there is a potential for a spontaneous growth in the number of recipient families like the increase which occurred between 1967 and 1973. Many of the non-participants appear to be in families which have other resources available to them in the form of financial support from the larger household in which they reside. They may therefore have a lower probability of enrolling in the program and this is likely a matter of conscious choice.

Second, while the participation probabilities of AFDC families from higher income households appear to be low, there are a significant number of them: in 1983, approximately 220,000 eligible female-headed subfamilies lived in households where annual income was $30,000 or more. Policy changes which extend current AFDC income-deeming provisions for subfamilies headed by minors to all households may lead to significant caseload and cost reductions if they are participating even in moderate numbers.

Third, in a complementary manner, the number of AFDC families who would be adversely affected by such policy changes could be substantial: a relatively large number of current recipients could either be made ineligible or receive reduced benefit payments. Furthermore, the implication from the distributional data is that the adversely affected families have a higher probability of being white than black, since white female subfamily heads have a higher likelihood of living in households with substantial income.

Implications for Future Research

As discussed earlier, the implications of the dramatic increase in the number of identified subfamilies on Current Population Survey files have some potentially important implications for the research community. These implications extend beyond analyses of the AFDC Program to analyses of the poverty population and of general demographic trends in household formation and structure.

But several important questions about both general demographic trends and the significance of subfamilies among AFDC participants remain unresolved by the limited scope of the current study. These questions can be classified into three areas, moving from the general to the specific:

- General Demographic Trends. Did the coding techniques prior to 1981 mask a general trend toward more multi-generational households in the 1970s? If so, what were the causes of this trend and has the trend had a positive or negative effect on the well-being of families?

- Analyses of Poverty Trends. What effect did the coding changes have on the poverty counts provided annually by the Bureau of the Census? Between 1980 and 1981, for example, the number of families in poverty rose from 6.2 million to 6.9 million. How much, if any, of this change was due to the subfamily coding changes?

- Analysis of AFDC Policies. How many of the eligible subfamilies identified by the current study actually participate in the AFDC Program? Will changes in program policy which extend the 1984 deeming provisions to non-teenage AFDC units result in substantial cost reductions? Or will the effects be relatively small?

Questions in each of these areas can be pursued either by using more detailed techniques applied to CPS data or by more fully exploring other data bases. General demographic issues relating to subfamily formation and household structure across the entire population, for example, can be examined using the Panel Study on Income Dynamics produced by the

University of Michigan's Survey Research Center. Changes in poverty counts can be disaggregated using CPS files and applying techniques similar to those used in this paper for analyzing changed in AFDC eligibility.

The AFDC participation issues can be further examined using more detailed data from the AFDC Quality Control Surveys on family structures. Additionally, the authors of this paper believe that the Survey of Income and Program Participation (SIPP) can be used to better measure participation rates among income subgroups of AFDC eligibles. The SIPP collects income data on a monthly basis, thus resolving some of the income inconsistencies between the CPS and the AFDC Quality Control data discussed earlier in this chapter. While an AFDC simulation module would have to be developed for use with the SIPP in order to estimate the number of eligibles, the simulation could be done for the month(s) equivalent to the QC survey month.

The further exploration of these issues is extremely important. It appears that at least some of the significant changes observed in the low-income population since 1980 may have been the result of the coding change. Without further work, many analysts will remain unaware of the potential importance of this change and many decision makers will be deliberating policy alternatives using incomplete information.

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Appendix Table A

Ratios Used to "Backcast" the Number of Subfamilies Headed by Unmarried Women, 1967-1981

Years Compared	Age Group	Unweighted Birth Ratios for Unmarried Women		Ratios weighted by Composition of the AFDC-Eligible Population	
		White	Black	White	Black
1967/1981	Under Age 20	.47	.69	.024	.041
	20 - 24	.44	.41	.062	.053
	Over Age 24	.25	.46	.088	.124
	Total Ratio, all groups (weighted)			.392	
1970/1981	Under Age 20	.62	.89	.031	.053
	20 - 24	.52	.52	.073	.068
	Over Age 24	.37	.48	.130	.130
	Total Ratio, all groups (weighted)			.485	
1973/1981	Under Age 20	.64	.99	.032	.059
	20 - 24	.40	.56	.056	.073
	Over Age 24	.36	.49	.126	.132
	Total Ratio, all groups (weighted)			.478	
1976/1981	Under Age 20	.77	1.00	.039	.060
	20 - 24	.49	.69	.069	.090
	Over Age 24	.44	.59	.154	.159
	Total Ratio, all groups (weighted)			.571	
1979/1981	Under Age 20	.91	1.06	.045	.064
	20 - 24	.75	.95	.105	.124
	Over Age 24	.62	.83	.217	.224
	Total Ratio, all groups (weighted)			.779	
1980/1981	Under Age 20	.99	1.04	.050	.062
	20 - 24	.94	.98	.132	.127
	Over Age 24	.89	.93	.312	.251
	Total Ratio, all groups (weighted)			.934	

Note: Includes demographic adjustments only.

SOURCE: Adjustment ratios derived from fertility data in Vital Statistics of the United States (annual). See Chapter III for derivation methodology.